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EDUCATIONAL NEWS AND EDITORIAL COMMENT

The War and the Schools

The course of study in American schools can never be the same after the war that it was before. In a bulletin addressed to the teachers of New York state Commissioner Finley has put the matter forcibly. The bulletin is full of significant paragraphs; we must be content with a few sentences:

But beyond studying all those questions involved in this war, which is necessary to effective defense back of the line, and beyond the rigorous disciplines of those who are preparing for these same defenses, there are very practical services which the teachers can give in the very first line. They can help, person for person, teacher for soldier, to equip and fit and clothe and give spirit to those who are actually to enter this grim and mortal combat of the air, earth, or water.

In France I saw posted everywhere on the bulletin boards, in city and village, the most recent of the many proclamations and decrees of the central and local governments of France. Here were the words of advice or warning, of appeal or command. And these proclamations, I was told, were read and expounded to the children and villagers alike by the school teachers. In like manner you, teachers, are chosen to be the living voice of your government, national and state. The words of your President, the proclamation of your Governor, the appeals of your Council of National Defense, the needs of your Red Cross, must reach every ear in the Republic, and you, as no one else, can see that directly or through the children every home in your community is reached.

The Minister of Public Instruction of France early in the war made the proud claim that in all the schools of the Republic there was not a single teacher

who continued to live and move in the same narrow paths, or taught the same lessons in the same way, though the curriculums, I found, are practically unchanged, or undertook only the same tasks as before the war—no one who addressed to his pupils in these decisive hours only the customary words of yesterday. No greater satisfaction could come to me than to be able to make the same claim for the University of the State of New York that Albert Sarraut made for the University of France, in the opening days of a war which is now our war, that every teacher is serving the Nation as honorably, as devotedly, as unselfishly, as any soldier in the Army of Present Defense.

The task of the American school in these times is no sentimental task of arousing vague emotions of a patriotic flavor. It is the duty of schools to give pupils a new view of social and civic responsibility. We have lived through a period of individualism appropriate to the frontier, where every man was absorbed in the hand-to-hand struggle with nature. Now the crisis of the nation as a whole brings to our minds a new lesson, the lesson of national solidarity, co-operation, and interdependence.

The Bureau of Education and the Food Administration are doing a great service in bringing material for instruction to the schools. Every teacher should secure from the Food Administration President Van Hise's pamphlet entitled *Conservation and Regulation in the United States during the World War*. This pamphlet was prepared for higher institutions, but it is full of facts that ought to be presented to the lower schools.

The *Lessons in Community and National Life* have been announced in full in earlier numbers of this *Journal*. The October and November lessons are out and are being widely used. They can be secured by addressing the Food Administration in Washington.

Physical Education

There can be very little doubt that one result of the war will be a wider national interest in physical fitness. For years the effort to introduce physical training into the schools has been treated as a kind of local matter, somewhat important as a means of relieving the bad effects of city life or confinement in school buildings, but trivial and hardly in harmony with the main interests of the schools. Suddenly, with our army depending for its operations on fitness of body, the nation

has come to a new realization of the importance of physical education. Not only are the schools being allowed to do something along these lines, but they are being urged from without and within to train up vigorous children so that we may have a strong and healthy nation.

Some of the current discussions of this matter may help to make the point:

BATON ROUGE, LA.—A comprehensive course in physical training, prepared under the direction of State Superintendent Harris by Professor J. E. Lombard, physical director of the New Orleans public schools, will be ready soon for distribution among the 8,000 teachers of the state. Copies of the course will be accompanied by instructions from Superintendent Harris to begin the course at the earliest practicable date. The course covers the various stages in the growth of the child from entry into the public school to graduation. It will be condensed to a small pamphlet, which will present its salient points so lucidly that any teacher can handle it.

The serious need for such a course was impressed upon Superintendent Harris by the large number of Louisiana's young men who could not pass the physical requirements for military service.

TRENTON, N.J.—That the physical training law enacted at the last session of the legislature to be adopted in the public schools of the state is the fullest recognition of the value of this training found in any American state was the declaration today by State Commissioner of Education Calvin N. Kendall in a letter to the school officials and teachers on the subject. The law will commence to operate at the opening of the new school term, as the course of instruction in physical exercises has already been prepared and announced by the Department of Public Instruction.

HARRISBURG, PA.—Immediate study of the subject of physical training for adoption for all schools of the state system outside of Philadelphia and Pittsburgh is to be undertaken by the State Board of Education. Such training is a part of the courses in the two cities and is optional in other districts.

As a result of discussion of the subject at a recent meeting of the board, Dr. J. George Becht, the secretary, was directed to make an inquiry into the manner in which it is carried on in the state and together with a committee consisting of Superintendent C. F. Hoban, of Dunmore, and R. T. Adams, of Warren, will prepare a report outlining an appropriate course for the schools. Under the law the board is authorized "to prescribe rules and regulations and to take such other action as it may deem necessary to extend and promote the physical and moral welfare of the children in the public schools."

The report will cover work to be done in all grades except the kindergarten and will also include training in high schools. It is possible that it will take up two hours a week, and so that there may be no interference with school

work it is possible that an extension of school hours may be recommended. It is understood that special emphasis will be placed on the hygienic aspects of physical training.

Junior High Schools

The city of Denver has opened junior high schools with deliberation and with insight into the problems which such an enterprise faces. The circular sent by the superintendent to teachers and principals is worth quoting:

It must be understood that the junior high school ranks with the elementary school, but does not rank above it; the elementary school is first. There has been no attempt to assign the most excellent teachers to the junior high school at the expense of the elementary school. There has been an attempt to balance the new junior high school with the elementary school. The junior high school will fail unless we keep the balance. Assignment to the junior high school is no greater recognition than assignment to seventh or eighth grade. Assignments to and from the junior high school may be made with the same freedom in the future as assignments have been made from grade to grade in the elementary school in the past.

Elementary principals are requested to use the departmental plan of organization for at least the seventh and eighth grades and to conform as nearly as possible to the course of study of the new junior high school. A school may, by special permission from the superintendent, have the seventh and eighth grades conform very closely to the new junior high school, with classes in language, commercial subjects, etc. Such a school may, by special permission, make the hours of the seventh and eighth grades—8:30 to 12:00, and 1:00 to 3:30. Principals are not expected to allow small classes in the subjects mentioned above. Unless there is strong demand for such an organization it will be better to send pupils desiring the work of the junior high school to the Evans or Aaron Gove.

It is hoped to introduce gradually a junior high-school system throughout the whole city without inconvenience to patrons or teachers. We earnestly request all teachers to help in the movement.

The Course of Study

The course of study which has been adopted for these junior high schools is shown on pp. 165 and 166. This shows a combination of traditional elementary subjects with subjects brought down from the high school. Especially when one notes the elective opportunities offered does it become evident that the student can save a full year by

anticipating courses which formerly were open only to those who had finished elementary schools.

PROGRAM OF STUDIES

Grade	Prescribed Work	Electives
7B	English ..... 8 (Grammar Composition Literature Spelling Penmanship) Arithmetic ..... 5 Geography and General Science ..... 5 Music ..... 2 Drawing ..... 2 Physical Education and Hygiene ..... 5 Manual Training or Sewing and Cooking 4	
7A	English ..... 8 (Grammar Composition Literature Spelling Penmanship) Geometry ..... 5 American History ..... 5 Music ..... 2 Drawing ..... 2 Physical Education and Hygiene ..... 5 Manual Training or Sewing and Cooking 4	*Elect one* Penmanship and Commercial Arithmetic ..... 5 Latin ..... 5 French ..... 5 German ..... 5 Spanish 5
8B	English ..... 8 (Grammar Composition Literature Spelling Penmanship) Algebra ..... 5 American History ..... 5 Music ..... 2 Drawing ..... 4 Physical Education and Hygiene ..... 5 Manual Training or Sewing and Cooking 4	*Elect one* Bookkeeping ..... 5 Latin ..... 5 French ..... 5 German ..... 5 Spanish 5

PROGRAM OF STUDIES

Grade	Prescribed Work	Electives
8A	English (Literature Composition) 5 Arithmetic (Commercial) 5 Physiography 5 Music 2 Drawing 4 Physical Education and Hygiene 5	*Elect one* Bookkeeping and Typewriting 5 Manual Training or Sewing and Cooking 5 Latin 5 French 5 German 5 Spanish 5
9B	English (Literature Composition) 5 Algebra 5 Music 2 Drawing 4 Physical Education and Hygiene 5	*Elect two* Bookkeeping and Typewriting 5 Manual Training or Sewing and Cooking 5 Elementary Science 5 Commercial Arithmetic 5 Ancient History 5 Latin 5 French 5 German 5 Spanish 5
9A	English (Literature Composition) 5 Algebra 5 Music 2 Drawing 4 Physical Education and Hygiene 5	*Elect two* Bookkeeping and Typewriting 5 Manual Training or Sewing and Cooking 5 Elementary Science 5 Commercial Arithmetic 5 Ancient History 5 Latin 5 French 5 German 5 Spanish 5

Figures after subjects represent the number of periods given per week.
Periods are 40 minutes long.
Double periods are arranged for manual subjects.

The Iowa Child Welfare Bureau

Professor B. T. Baldwin has been appointed to organize the Bureau of Child Welfare provided by the action of the last legislature of Iowa. This *Journal* asked Professor Baldwin to supply a statement of the plans of the Bureau, and is glad to print the following outline which he sends:

"The Iowa Child Welfare Research Station is established for the scientific study and investigation of so-called normal children. This is the first research

station in America for the conservation of the normal development of boys and girls, although several other states keenly feel the need of such a laboratory. Iowa's station aims to set a high standard of scholarly research within its field." The establishment of this station represents a step in advance in educational progress.

The conservation of human development its chief purpose.—The people of Iowa believe that Iowa's greatest institutions are her homes and schools, and the greatest assets in these are the normal boys and girls. Science has made wonderful progress during the past few years along the lines of the conservation of its natural resources of minerals, timber, coal, gas, water, oil, and the conservation of plant and animal life. A short time since we were told that two good ears of corn could be made to grow where one was growing, and today this is a reality. Within the next ten years the state of Iowa is going to make it possible for four or five normal boys or girls to grow up within a home or school where at present two, three, and sometimes four of every five are defective in eyesight, hearing, speech, have deformed or defective teeth, suffer from malnutrition, adenoids, and enlarged tonsils, special mental defects, or, what is still more serious, are delinquents, epileptics, potential paupers, drunkards, or criminals. The Iowa Child Welfare Research Station, established on a graduate basis at the University of Iowa, is going to stop some of this waste and save the state a portion of the tremendous expense and misery involved. Its functions will be to call the attention of the state and ultimately of the country at large to the possibilities and the methods of the conservation of normal boys and girls and to make a conscious effort to raise to a higher degree of efficiency those who are now considered normal. The program of the Research Station is positive, constructive, and scientific, for thoughtful people are no longer satisfied with temporarily "patching up" the by-product of humanity. The physical and mental defects and traits must be caught in the making and eliminated or trained to a higher degree of efficiency and usefulness.

Co-operation an important feature.—The Research Station will give its best time, thought, and energy to those things which are worth while in boys and girls. The state is its laboratory and the welfare of the state its goal. One of the fundamental aims is close co-operation with authorities working in allied fields. The work will be detailed, intensive, and consecutive, with the collaboration of the College of Medicine for the study of preventive diseases, nutrition, hygiene, and, later, speech defects; the College of Dentistry for the prevention of deformed and defective teeth; the Department of Economics and Political Science for social surveys; the Department of Home Economics for work in dietetics and home conditions; the School of Education for educative processes; the Department of Psychology for the analysis and development of mental traits and capacities.

Another important phase of this plan of co-operation is that the people of the state may bring their children to the director at the state university as a consulting psychologist for scientific examination and counsel.

Scientific research a fundamental aim.—The Station will also appoint research professors and assistants who will devote full time to the work, which will be organized along specific and detailed experimental lines. Some minor problems may be worked out in the course of a few months or a year; other basic problems will require considerably longer, although the results attained will be made known from time to time in technical monographs.

The dissemination of applied science a function.—The opportunities for class and home study in the state are many and promising. Some very definite work is being organized for the Iowa branch of the National Congress of Mothers and Parent-Teachers' Association. For example, a comprehensive source book on *The Physical and Mental Development of Children* is in preparation for the Iowa Child Study Committee. This volume will contain original material, experimental data, recommendations, and summaries of the best scientific books on the physical, mental, and social hygiene of the child, with careful directions and suggestions for study. Classes will be organized in all sections of the state, and type lessons and questions furnished, with carefully selected child welfare libraries assembled. Similar lines of work for the conservation of normal children are being organized for use by the Federation of Women's clubs, committees on child welfare, child hygiene committees, and other organizations.

Gary Schools in New York

Before this number of the *Journal* reaches its readers the political issues in New York City will have been settled by the election. The adjustments which follow the election will include important steps in the development or retrogression of the school system. The new mayor has as one of his first important official acts the appointment of a new board of education consisting of seven members. The policies of this new board will in some measure reflect the policies of the mayor.

What the two leading candidates think about education has been expressed almost entirely in terms of the bitter controversy which has been waged throughout the campaign over the Gary schools. The following extracts from addresses by the candidates will supplement the statements published a month ago. Judge Hylan is reported by the *Brooklyn Eagle* as making the following objections:

> The traveling about from one classroom to another, from the lower floor of the building to the top, and on rainy days or in stormy weather the carrying of wet clothes, books, rubbers, and umbrellas, and the time allowed for play and amusement, all has a tendency to make many of the children weary, to become physically unfit, and they are unable to apply themselves to study or

work in the classroom. Others become nervous and excited, and it takes some time for them to quiet their nerves, and get their minds in a condition to study. As a result of these conditions, the children receive a much lower quality of education than under the old plan.

There is a kind of externality and vagueness in the charges made against the schools which is disquieting when one thinks that their author may be in position to control the greatest school system in the United States through the appointment of a new full board.

Mayor Mitchel's answer is given in the following extract from one of his addresses:

We have undertaken to democratize, if I may use that word, the educational facilities, in order that the children in our public schools may have the same facilities, the same advantages, and the same opportunities as have hitherto been accorded only to the children of the well-to-do in the expensive private schools. The playground, the workshop, the auditorium, the science room, these things are necessary to develop child opportunity and child life, to let physical development go hand in hand with the mental development in order that the mental development may be quicker and better.

No one knows better than I that there have been obstacles, difficulties, defects, and friction in the working out of that plan to give these new advantages to the children of all the people. These defects are the defects of administration, and I may say that, in some instances, some of these defects have been brought about by the deliberate purpose of a few within the educational system to wreck the experiment and make it appear to be what it is not.

Do you think that those men in the great array of manhood on that western front of Europe could hold back the onrush of those forces of aggression and autocracy as they have done if there had not been a virile childhood in France, in England, in Italy, and in the other allied nations? Do you think that if America had not concerned herself with her childhood we would be able to send abroad, as we are doing today, great armies of the Republic, to take their places by those others and to protect this country from what otherwise might come to her shores? Yet it has been said by all those who have been engaged in the selection of the men for these new armies that one thing stands out—that the young men of America have not had the physical training in their early youth that would make them as efficient physically as the soldiers that America sends out ought to be. Therefore it is our concern for that reason, as well as for the general reason of humanity, to care for the children of our city.

What the other people in New York think is not so easy to find out. There is the bitterest partisan feeling, as is indicated by the following news item, dated October 19:

Spurred on by hysterical parents, nearly 4,000 children took part in violent demonstrations against six schools in the Bronx today. The police were attacked repeatedly with sticks, stones, milk bottles, and even garbage cans. The fights lasted from 8:30 o'clock until the afternoon. Ten children and one man were arrested.

Police reserves were called out tonight to disperse 5,000 persons who were holding what they called an anti-Gary meeting in the Bronx. Policemen who attempted to break up the meeting on the ground that it was being held without a permit were hooted by the crowd, which refused to move. When the police reserves arrived they were met by a shower of stones and sticks.

The police made a few arrests, and the crowd followed the prisoners to the police station. It was necessary to summon every available patrolman and Home Defense League member in the district before the crowd was dispersed.

Full investigation of what he termed the "strong, sinister influence" back of the rioting of the school children will be made by the Board of Education, according to an announcement made tonight by President W. G. Willcox.

"There seems unquestionably to have been a strong, sinister influence that gave the children at first an organization they could not possibly have attained of their own accord," Mr. Willcox said.

Parents of the children received the opportunity tonight to state their grievances before members of the Board of Education at several meetings held in the affected districts. Moving pictures depicting various phases of the Gary plan were shown at the meetings.

Two of ten boys arrested during the rioting today were fined and the others were paroled in the custody of their parents for examination on Monday. A man arrested after he had harangued a crowd of the youngsters was held for further investigation.

The rioting pupils repeatedly assembled after being dispersed by police reserves, and school officials declared they were urged on by persons who addressed them along the streets. Scores of mothers, hearing of the rioting, rushed to the schools, many of them joining the parades that trooped through the streets.

The *New York Tribune* represents the belief of others in its editorial columns as follows:

The truth of the Gary plan is already familiar to thousands of parents throughout the city. Whatever its defects of detail and execution at the present time, there can be no debate as to its purpose and goal. Its goal is to give to every child in the city schools exactly the same rounded education now available in the most up-to-date and expensive private schools.

There is a general tendency under many names to realize the truth that book learning is only part of a child's education. It is an important part, and the Gary idea does not neglect it; counts, in fact, on getting better results in the book learning by stimulating the child's interest in other directions at the

same time. But the other side of life, the contact with pots and pans, with plane and saw and hammer, with the visible world of art, with directed play, is now realized to be quite as important.

The theory has nothing to do with education in trades except as an aptitude thus developed in early years leads to later study. The private school teaching carpentry and cooking does not aim to make cooks or carpenters, necessarily Neither does a Gary public school. The sole aim is to develop every faculty into a rounded personality, on the theory that, whatever trade or profession or business the boy or girl may ultimately choose, the rounded development of body, mind, and spirit cannot but help.

Those of us with a country upbringing will feel that much of what the Gary school teaches in class is the natural diet of the ambitious boy on a farm. Yet the system also offers great opportunities unknown to the self-taught country boy. It is undoubtedly the best system yet devised for giving city children the complete educational advantages of all-round American life. It offers the broadest kind of training. It sets a new mark in city schooling.

It is, in short, exactly all the things that Judge Hylan said it was not. By substituting white for black in the remarks of the Hearst-Murphy candidate his dissertation can be made quite accurate.

A STUDY OF THE COMMON MISTAKES IN PUPILS' WRITTEN ENGLISH[1]

AMELIA DIEBEL AND ISABEL SEARS
Garfield School, Cincinnati, Ohio

Language falls naturally into two divisions—oral and written. One would expect the written form to be merely a reproduction of the oral, with practically the same set of difficulties and errors. An investigation has already revealed the most apparent errors made in the use of oral language. In order to furnish information as to the kind and frequency of errors made in written language, and whether these errors were general or confined to a few children, an investigation was made of the written work of Cincinnati school children. The data collected have been used to determine the most frequent errors and what remedies may be applied to further the elimination of the most common ones. No attempt has been made to deal with spelling.

This investigation reveals many technical errors, the tabulation of which in no way discloses the real value of the content of the pupils' compositions. Most of the papers showed continuity of thought and clear ideas well expressed, for which the pupils receive no credit in this investigation, the purpose of this study being to treat of these technical errors only.

In collecting the material the same schools and classes were selected as were used in the collection of oral errors (see the *Elementary School Journal* for September, 1916) for the following reasons: these schools were representative of the different districts of the city; and the use of the same children allowed a better comparison between oral and written language. The teachers from the third, through the eighth, grade were asked to have the pupils, some time during the week of October 23, write an original composition on "A Vacation Experience." The teachers were asked to explain the

[1] Done in the Seminar of Professor Cyrus D. Mead, College for Teachers, University of Cincinnati.

title and to give no other instruction. The composition, amounting to one-fourth of a sheet of foolscap, was to be the first attempt of the pupil. The papers were turned over, unmarked, to those making the investigation. From each grade 190 were selected at random, making a total of 1,140 papers. Table I gives these data.

TABLE I

NUMBER OF PUPILS OBSERVED FOR ERRORS IN WRITTEN ENGLISH, OCTOBER 23–27, 1916

Schools	Grades					
	3	4	5	6	7	8
Webster	29	35	41	35	.....	.....
McKinley	.....	.....	.....	.....	24	38
Garfield	47	47	35	.....	27	.....
Washington	.....	.....	.....	.....	.....	57
Vine St	.....	.....	.....	35	.....	.....
28th District	.....	11	.....	.....	.....	.....
Columbian	29	.....	.....	37	32	39
30th District (Fairview)	.....	27	41	.....	.....	.....
North Fairmount	.....	.....	.....	15	.....	.....
Chase	.....	.....	.....	.....	32	.....
Hyde Park	.....	35	41	35	.....	.....
Clifton	35	.....	.....	.....	21	.....
Mt. Washington	13	.....	.....	.....	14	29
Pleasant Ridge	37	30	.....	30	40	.....
Linwood	.....	.....	32	.....	.....	27
Anderson's Ferry Colony	.....	5	.....	3	.....	.....
Total number of pupils for each grade	190	190	190	190	190	190

In spite of the fact that instructions stated that no help was to be given, some papers were so carefully written that one was led to suspect an overanxiety on the part of the teachers to have good papers. Nevertheless the papers revealed the following percentage of errors and of children making them shown in Table II.

Table II is to be read as follows: 100 per cent, or every child in the third grade, made some error in composition form, 98.8 per cent of the fourth-grade children, 100 per cent of the fifth, etc., with an average of 92.2 per cent of all the children making errors in composition form. Of all the errors made in the third grade 30 per cent were in composition form, 31.3 per cent in punctuation, etc., while of all the errors made in all the grades 30.1 per cent were in composition form, 30.8 per cent in punctuation, 10.8 per cent in verbs, etc.

The item "Composition form" is intended to include the proper division of sentences, avoidance of too frequent repetitions of the same word, omission of a line between the title and the composition, indentation for a new paragraph, avoidance of abbreviations, etc.

TABLE II

TABLE OF PERCENTAGES

Classification of Error	Grades						Average Percentage
	3	4	5	6	7	8	
PERCENTAGE OF CHILDREN MAKING THE ERROR							
Composition form	100.0	98.8	100.0	97.0	80.7	77.0	92.2
Punctuation	93.0	99.0	100.0	88.2	92.0	81.0	92.2
Verbs	43.7	45.7	39.5	33.1	41.2	26.5	38.3
Syntactical redundance	34.2	37.9	57.6	33.7	21.8	18.3	33.9
Carelessness	19.7	25.7	30.7	34.1	26.2	20.2	26.1
Prepositions	15.8	22.9	22.6	19.6	19.4	19.4	19.9
Nouns and pronouns	17.0	18.1	18.8	17.3	16.0	13.1	16.7
Conjunctions	3.9	10.5	9.0	7.6	21.0	8.1	10.0
Adjectives and adverbs	9.2	7.1	8.4	10.6	6.8	7.4	8.2
Illiteracy, colloquialisms, and slang	1.8	6.6	11.3	4.0	6.2	4.7	6.7
Ambiguous expressions	4.7	3.6	6.8	3.9	9.9	8.3	6.2
Negatives	1.3	0.5	1.3	4.4	1.2	0.0	1.4
PERCENTAGE OF ERROR MADE							
Composition form	30.0	28.6	33.3	30.9	26.3	31.7	30.1
Punctuation	31.3	31.3	29.2	29.6	32.9	30.2	30.8
Verbs	13.2	11.0	8.7	9.9	12.7	9.5	10.8
Syntactical redundance	10.6	10.8	12.4	10.2	6.1	6.8	9.5
Carelessness	4.2	4.3	4.5	4.5	5.6	5.2	4.7
Prepositions	2.9	4.6	3.4	4.4	3.9	5.2	4.1
Nouns and pronouns	3.8	3.7	3.3	4.2	3.9	4.3	3.9
Conjunctions	.6	1.7	1.3	1.6	3.4	2.0	1.8
Adjectives and adverbs	1.9	1.3	1.2	2.8	1.5	1.7	1.7
Illiteracy, colloquialisms, and slang	.4	1.8	1.4	.6	1.7	1.3	1.2
Ambiguous expressions	.5	.4	.8	.6	1.7	2.1	1.0
Negatives	.2	.1	.1	.7	.3	0.0	0.2

In "Carelessness" is included repetition of a word, as "swimming in the the creek," omission of a word, as "I asked my mother if could go to my aunt's," etc. By "Illiteracy," "Colloquialisms," and "Slang" is meant such expressions as "eatings" and "scooted,"

"being's it was hot," "it was hard going, but oh, you coming back," and "we beat it home," etc.

An examination of the percentage tables reveals the fact that some of the errors increase from the third grade to the eighth, while some decrease. The ideal situation would be one in which the number of errors fell steadily; but this would not take into account the fact that as the child's mind grows he will use more complicated forms of expression. Take the case of conjunctions, for instance. Third-grade children use simple sentences almost exclusively. They do use the conjunction "and," but generally their language would be better if it were omitted; their use of "and" therefore is really misuse, to be classified either as syntactical redundance or as an error in composition form, viz., failure to divide into sentences, and not as an error in conjunctions. The percentage of error, therefore, and of children making that error is likely to rise instead of to decrease.

An examination of the mistakes in written English in general calls attention to the familiar fact that there is little correlation between the child's spoken and written language. The child, in fact, sets up for himself a double standard. His ordinary speech will not do at all when he expresses himself in writing; all the grammar he has learned so far he applies to his written work only; and not until we succeed in making him use the correct form unconsciously can we alter his oral expression.

Table III gives a list of the most common errors in oral language, together with the number of times the same error appeared in written work. With the exception of the third grade, the figures represent chiefly the same children, in so far as one finds the same children in a city school a year later.

Of the thirty-seven errors listed in Table III, thirty-two occur more frequently in oral English than in written, three occur more frequently in written, and two the same number of times in each. The writers of this article are aware of the fact that the amount of English spoken spontaneously did not exactly equal that written on the assigned subject, but in their judgment the two amounts approximated each other. This similarity of amount, added to the fact that practically the same children were observed and the errors

classified and tabulated by the same persons, ought to make a comparison between the figures of the table possible, though not absolute. The fact that the same thing happened in thirty-two out of thirty-seven cases adds weight to the conclusion to be drawn

TABLE III

A COMPARISON OF FREQUENCY OF MOST COMMON ERRORS IN ORAL AND WRITTEN ENGLISH

English	Oral	Written
haven't no *for* haven't any	233	13
seen, had saw	180	24
ain't *for* am not, isn't, aren't	124	1
done *for* did	113	5
got, ain't got, haven't got	112	5
I and my brother	96	55
ain't *for* haven't, hasn't	89	1
Frank and me, *for* Frank and I	80	24
you was *for* you were	76	160
them *for* those	75	0
learn *for* teach	71	18
can *for* may	60	0
my mother she	58	19
got *for* receive, become, grow, is	53	2
that there	38	0
don't *for* doesn't	36	1
it was me	36	4
leave *for* let	34	15
went *for* gone	32	3
come *for* came	31	7
never gave *for* didn't give	30	8
by my aunt's	28	16
drawed, throwed, knowed, etc	27	21
broke *for* broken	22	1
lay *for* lie	21	9
make *for* prepare, get	21	4
says *for* said	20	4
all two, all both	19	0
by us *for* near us	16	10
why, and, so, at beginning or in middle of sentence	15	65
he does it like she does	15	15
that, which, *for* who	14	11
in back of	12	10
funny, lots, etc. *for* queer, many	11	41
et *for* ate	11	0
run *for* ran	11	11
set *for* sit	10	7

from this table, namely, that children's written English is much freer from error than their oral language.

This conclusion is strengthened by a comparison of Table II in this article with Table IV in the article on oral errors which

appeared in the *Elementary School Journal* of September, 1916. Such a comparison shows that in oral speech verbs caused 50 per cent of the errors, double negatives 11.6 per cent, etc., while in written language verbs caused only 10.8 per cent of the errors and negatives 0.2 per cent. The same thing is true with the comparison of each item, proving apparently conclusively that children do make more errors in oral speech than in written. The examination of the papers proved that the difference in frequency of the errors in oral and written speech is not due to the fact that the child uses the expression "haven't no," for example, less often when he writes than when he speaks, but to the fact that when he writes he more frequently uses it correctly.

The main question in the teaching of written English, as revealed in the papers examined, is not so much one of the use of language as of punctuation, composition form, and carelessness, these three items supplying 66 per cent of all the mistakes made. How can a child be taught to express himself in writing that is formally correct, properly punctuated, and free from carelessness?

It is important that grammar and composition be studied together so that each may serve as an aid in developing the other. It is composition, oral and written, more than any other subject, that will reveal to the teacher the errors needing correction. In the grammar lesson special stress should be laid on those points which will give the child more power in correcting his own expression, both oral and written. In these lessons each teacher must aim to meet the immediate needs of her pupils. Emphasis must be laid on the correct forms until the child makes use of them unconsciously. Every written lesson should be a lesson in composition. If this be done in the form of paragraphs as early as in the third grade, later breaking up of the habit of writing each sentence on a separate line will be eliminated. If, instead of writing on the board questions to be answered in writing, the teacher were to place there an outline of the subject, and the child be required to answer in paragraphs instead of fragmentary numbered sentences, composition would be better correlated with the other subjects, more drill in the technicalities furnished, and its use made more apparent to the child.

TABLE IV

SHOWING NUMBER OF TIMES EACH ERROR WAS MADE AND NUMBER OF PUPILS MAKING THE ERROR

CLASSIFICATION OF ERROR	GRADES												TOTAL	TOTAL
	3	3	4	4	5	5	6	6	7	7	8	8		
	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error		
Punctuation:														
Period—														
Omitted at end of sentence	105	46	39	27	66	38	31	26	44	34	22	16	307	187
In middle of sentence	19	13	16	11	17	15	12	12	9	6	1	1	74	58
Question mark instead of period	29	11	15	3	1	1	2	2	3	2	0	0	50	19
Period instead of comma	1	1	2	2	16	15	1	1	6	6	1	1	27	26
Omitted at end of abbreviation	1	1	2	2	0	0	0	0	11	6	5	4	19	13
Comma—														
Omitted after subordinate clause when it precedes main clause	40	39	101	70	127	86	103	81	113	81	69	57	553	414
Omitted in appositives	2	2	11	10	33	25	16	16	38	30	35	31	135	114
Omitted between city and state	7	6	16	14	20	20	15	13	25	24	16	15	99	92
Omitted in series	6	6	27	20	22	17	15	13	3	2	7	7	80	65
Wrong use—*One hot, summer day*	7	4	6	6	6	5	16	15	14	11	27	21	76	62
Omitted before direct quotation	3	3	15	11	18	16	3	2	7	4	2	2	48	38
Omitted in direct address	0	0	2	2	2	2	3	3	0	0	1	1	8	8
Omitted in dates	0	0	1	1	2	2	2	2	1	1	0	0	6	6

Apostrophe:														
Omitted in singular possessive	58	36	48	37	36	32	30	27	21	15	23	21	216	168
Omitted in contractions	9	9	5	5	14	11	24	17	12	11	7	6	71	59
Wrong use—*The boy's were*	8	6	6	6	16	10	7	5	2	2	7	5	46	34
Omitted in plural possessive	4	4	2	1	2	2	5	4	6	6	7	7	26	24
Misplaced—*did'nt*	0	0	0	0	0	0	2	2	1	1	3	3	6	6
Capital—														
Wrong use in common nouns	85	41	111	64	80	52	38	25	42	29	28	16	384	227
Not used in proper noun	47	36	47	31	15	13	35	21	25	20	18	16	187	137
Not used at beginning of sentence	15	15	13	9	34	23	10	8	11	9	11	9	94	73
Not used in direct quotation	3	3	11	9	12	11	1	1	8	5	1	1	36	30
Not used in title	13	13	0	0	9	9	3	3	5	5	5	5	35	35
Quotation marks—														
Omitted in direct quotation	5	4	21	17	22	19	9	7	8	5	1	0	66	53
Used when there is no quotation	9	1	0	0	1	1	1	1	0	0	2	2	13	5
Placed in indirect quotation	0	0	1	1	3	2	2	2	1	1	3	3	10	9
Composition Form:														
Failure to indent for paragraph	76	71	24	24	39	37	33	25	10	9	11	10	193	176
No line omitted between title and composition	30	30	3	3	66	66	8	8	28	28	18	18	153	153
New line for every new sentence	62	62	19	19	1	1	0	0	2	2	0	0	84	84
Failure to recognize new paragraph	6	3	2	2	1	1	9	8	3	3	7	7	28	24
New paragraph with no change of subject	1	1	1	1	3	3	4	4	2	2	1	1	12	12
Line omitted between paragraphs	1	1	1	1	7	6	0	0	0	0	1	1	10	9
Title out of place	1	1	0	0	4	4	0	0	0	0	0	0	5	5

TABLE IV—*Continued*

Classification of Error	Grades												Total	Total
	3	3	4	4	5	5	6	6	7	7	8	8		
	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error		
Sentence structure—														
Failure to divide into sentences	124	63	241	119	339	157	205	107	167	109	132	83	1208	638
Reiteration	49	28	73	42	44	34	22	20	45	43	31	20	264	187
Lack of clearness	29	20	16	13	21	21	12	10	9	8	10	9	97	81
Main clause omitted	15	12	19	15	15	13	16	15	13	11	17	13	95	79
Beginning with *but*	7	7	16	12	18	17	22	17	10	9	16	10	89	72
No subject	14	13	16	11	21	15	9	9	5	5	3	3	68	56
No predicate	25	19	7	5	7	7	8	8	4	4	5	5	56	48
Whole composition in one sentence	8	8	11	11	1	1	3	3	0	0	0	0	23	23
Incorrect use of abbreviations	4	4	12	8	29	16	24	19	18	5	10	7	97	59
Figures for words	4	3	12	4	21	14	24	18	5	5	25	16	91	60
& instead of *and*	0	0	1	1	17	10	4	4	11	7	30	7	63	29
Verbs:														
Present for past	88	47	68	32	38	27	23	20	45	31	12	12	274	169
Present tense for present participle	5	4	1	1	2	2	0	0	1	1	0	0	9	8
Passive for active and reverse	1	1	0	0	2	2	0	0	0	0	2	2	5	5
Failure of verb to agree with subject in number	38	22	22	18	35	25	27	24	22	20	17	15	161	124
Wrong sequence—														
Would for *used to*	18	5	30	18	34	12	22	13	33	20	9	6	146	74
It was seldom that anything is taken	15	10	8	8	26	26	7	7	31	29	25	19	112	99
Would for plain past	2	2	6	4	5	3	19	9	4	4	6		42	28
Use of *and* with infinitive	3	2	2	2	4	4	5	5	8	7	2	6	24	21

Perfect participle for past, and reverse—														
Seen, had saw	6	2	2	2	5	4	3	3	7	6	1	1	24	18
Had wrote	3	3	2	2	0	0	0	0	1	1	0	0	6	6
Done for *did*	1	1	0	0	2	1	1	1	0	0	1	1	5	4
Have came	0	0	0	0	2	2	0	0	1	1	1	1	4	4
Had went	0	0	0	0	1	1	1	1	0	0	1	1	3	3
Impossible tense form—														
Drawed, growed, etc	4	4	7	7	1	1	4	3	3	3	2	2	21	20
Founded his way	3	3	8	5	4	3	2	2	0	0	1	1	18	14
Keep for *kept*	1	1	1	1	0	0	0	0	0	0	2	1	4	3
Ain't	0	0	0	0	2	2	0	0	0	0	0	0	2	2
Wrong verb—														
Learn for *teach*	0	0	9	7	1	1	2	1	1	1	5	5	18	15
Wrecked into a car	6	6	5	5	0	0	5	5	0	0	0	0	16	16
Leave for *let*	1	1	5	4	0	0	3	3	2	2	4	4	15	14
Lay for *lie*	1	1	1	1	5	5	2	2	0	0	0	0	9	9
Set for *sit*	4	3	0	0	1	1	0	0	2	2	0	0	7	6
Got for *reached*	0	0	1	1	0	0	3	3	0	0	2	2	6	6
Made for *prepare*	1	1	2	2	1	1	0	0	0	0	1	1	5	5
Raise for *rise*	0	0	3	2	0	0	0	0	0	0	1	1	4	3
Syntactical redundance:														
Too many *ands* and *thens*	46	27	68	38	110	58	36	24	26	21	23	17	309	185
And at beginning of sentence	76	37	73	37	84	54	33	23	5	2	7	6	278	159
Miscellaneous	24	15	12	11	21	20	29	25	20	17	27	18	133	106
So, well at beginning of sentence	4	4	16	11	11	11	12	11	14	11	6	6	63	54
In prepositions	8	8	7	6	14	14	16	16	12	11	3	3	60	58
My mother she	3	2	3	3	4	4	7	4	0	0	2	2	19	15
Carelessness:														
Omission of word	36	26	42	36	40	36	36	28	39	34	27	26	220	186
Omission of letter	5	5	7	6	14	11	12	11	13	13	13	13	64	59
Wrong word—*why* for *while*	8	6	13	12	21	20	5	5	11	11	3	3	61	57
Repetition of word	9	8	9	8	11	11	5	5	5	5	7	7	46	44
Extra letter	6	4	0	0	3	3	1	1	3	3	2	2	15	13

TABLE IV—*Continued*

Classification of Error	Grades												Total	Total
	3	3	4	4	5	5	6	6	7	7	8	8		
	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error	No. of Times Made	No. of Pupils Making Error		
Prepositions:														
In, up, for *into, upon*	30	23	43	27	41	30	33	26	27	27	30	26	204	159
Wrong preposition—miscellaneous	10	10	14	14	14	14	9	9	17	15	11	11	75	73
By my aunt's	1	1	4	4	2	2	6	6	1	1	2	2	16	16
To for *until*	0	0	8	7	0	0	3	3	0	0	1	1	12	11
By for *near*	0	0	4	4	3	3	0	0	2	2	1	1	10	10
In back of	2	1	1	1	2	2	2	2	0	0	3	3	10	9
Would of, had a	0	0	1	1	1	1	1	1	1	1	2	2	6	6
Confusion of preposition and conjunction	2	2	2	2	5	4	3	2	1	1	2	2	15	13
Nouns and pronouns:														
Singular noun for plural	21	16	7	6	11	9	8	8	5	4	5	4	57	47
No antecedent for pronoun	6	6	20	17	15	13	18	16	14	14	12	10	85	76
First personal pronoun, first in series	13	12	8	8	14	13	8	8	8	8	4	4	55	53
Reflexive pronoun for personal	1	1	7	6	6	6	8	8	8	7	10	9	40	37
Accusative pronoun for subject	5	5	6	5	8	7	0	0	3	3	2	2	24	22
Failure of pronoun to agree with antecedent in gender or number	1	1	6	5	2	2	3	3	3	3	4	4	19	18
Pronoun for adverb and reverse	0	0	2	2	6	6	4	3	4	3	2	2	18	16
Objective preposition or verb not in objective case	5	4	1	1	1	1	3	3	4	4	1	1	15	14
Wrong pronoun *which* for *who*	4	2	4	2	0	0	1	1	0	0	2	2	11	7
Predicate nominative not in nominative case	1	1	0	0	2	2	0	0	0	0	1	1	4	4
Pronoun for conjunction—*Which he did not listen to me*	1	1	0	0	0	0	0	0	1	1	1	1	3	3

Conjunctions:														
Wrong conjunction	3	3	13	13	17	16	9	9	36	32	11	11	89	84
Conjunction for adverb	2	2	9	9	2	2	9	8	5	5	4	4	31	30
Omission of *and*	5	5	7	5	8	8	3	3	2	2	5	5	30	28
Adjectives and adverbs:														
Quick for *quickly*, etc	7	5	8	7	14	13	13	11	11	9	14	12	67	57
Funny, lots for *queer, many*	14	11	8	7	2	1	10	9	6	6	1	1	41	35
A for *an*	8	7	5	4	7	6	10	9	2	2	0	0	32	28
Omission of *the*	1	1	1	1	1	1	2	2	0	0	2	2	7	7
Illiteracy, colloquialisms, and slang	6	4	30	25	28	24	8	8	21	15	13	13	106	89
Ambiguous expressions:														
Misplaced modifier	9	9	7	7	16	13	8	8	21	20	21	18	82	75
Negatives:														
Haven't no	2	2	1	1	2	2	7	7	1	1	0	0	13	13
Never gave	1	1	0	0	1	1	3	3	3	2	0	0	8	7

Table IV gives a complete list of the errors made, remedies for the most frequent of which are suggested as follows: Many of the items of punctuation are so complicated that the error will simply have to be overlooked in the lower grades. All the rules and reasons, however, are within the comprehension of the seventh- and eighth-grade children. The only difficulty to them is the number of things to be remembered. The question of punctuation, therefore, in the upper grades is one of carefulness, not of knowledge. Much carelessness can be eliminated by placing on the blackboard a list of the harder points to be remembered in punctuating a composition—for example: comma after subordinate clause when it precedes main clause; comma before and after appositives; comma in a series; apostrophe in singular and plural possessive; etc.—and by insisting that the children read their work over carefully, checking it according to the list. Skill in punctuating short sentences in grammar drills cannot be relied upon to transfer to composition work.

The elimination of carelessness depends very largely upon the teacher. Any normal child will be just as careless as he is allowed to be, and only by setting up ideals and by eternal vigilance in seeing that they are attained can we free the children's papers of their present multiplicity of errors in composition form and punctuation.

Composition form presents more serious difficulties. The large majority of mistakes here is in dividing into sentences and in reiteration. The recognition of the end of one sentence and the beginning of another appears to be a question of common sense almost entirely. All the items that go to make up composition form, if they can be taught at all, can be taught almost as well in the third as in the eighth grade. Skill in using the new knowledge of course will only be gained by practice; but if the instruction is given in the third grade, surely by the time the child has reached the eighth the formalities of composition writing will have become habitual, and the child's mind will be free to devote itself to the best phases of expression.

Of all the subjects in the school curriculum there is none for which the average child will have more direct use outside of school

than composition. A large percentage of children will receive no further instruction after leaving the eighth grade. Of the 1,140 papers examined only 4 were without error. If every lesson were a lesson in composition, with constant drill on punctuation, composition form, and grammatical expression, surely we might expect a greater degree of perfection. Even if Cincinnati school children were to show a smaller percentage of error than children of any other city, have we a right to be satisfied with so small a degree of perfection?

Of course the real value of a composition does not lie so much in the formalities of written work as in the strength and clarity of the ideas and in the beauty of expression. This article has attempted to criticize the papers examined from the standpoint of the smaller issue only, viz., the formalities of written work. It is the opinion of the writers that this is the real field of teaching written composition. There is a far greater need for instruction in expression in oral than in written work. If greater perfection in expression is developed in written work, we have no guaranty that the improvement will transfer to oral work, while improvement in oral work is bound to be reflected in the written. Let us therefore devote our time for improvement in forms of speech to the oral language of the pupils, and that item in written work will take care of itself.

AN OUTLINE OF THE COURSE IN GEOGRAPHY IN THE UNIVERSITY ELEMENTARY SCHOOL. III

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Introductory statement.—The continents studied in the sixth grade are South America, Africa, and Australia. Owing to the greater maturity of the children, reasoning from cause to probable effect is encouraged, as well as reasoning from effect back to cause. For example, they are now asked not only to explain the life conditions of a region by a study of the controlling physical conditions, but to make, from a study of these physical conditions, their own inferences regarding life-conditions.

The printed text and pictures are used to corroborate inferences and to furnish additional descriptive material. Through the increasingly wider use of references, greater facility in the use of books and pictures is gained. Much practice in the organization of material is given in connection with both map-reading and the presentation of reference material.

Aims.—The study of South America, its resources, its growing importance, and the readjustments to which its further development will lead is highly socializing in that it affords an opportunity for the consideration of some very vital present-day problems. Much depends upon the future attitude of the United States toward South American nations. The aims of the course are to confront the children with many of these South American problems; to help them see the enormous importance of solving them wisely; to lead them to feel their responsibility in helping to develop the right North American attitude toward South America; and to acquaint them with facts that will give them sound bases of judgment in South American questions. The comparison of African

and Australian problems with those of South America gives opportunity to apply principles formulated in the study of South America, and serves to stress further the relative importance of South America.

SOUTH AMERICA

As an introduction to the study of South America the knowledge the children already have of the continent is gathered together by class discussion, and from a physical wall map of South America, obvious facts such as the following are noted very briefly:

Location with regard to the United States
Location with regard to other continents
Size
Surface and drainage..... { Three prominent highlands / Three prominent lowlands / Three prominent drainage systems

The next approach is made through an introductory study of the people. Who are the South Americans? The aborigines? From what countries did the settlers come? How do South Americans resemble us? How do they differ from us? In what ways are they our superiors? May some South American boy or girl have ancestors of the same nationality or nationalities as yours? What languages do they speak? Why? Questions such as these are designed to give a general notion of the many kinds of people in South America rather than to distinguish between the characteristics of the members of various South American nations. They are answered by the study of the race map (Bowman, p. 317) and pictures and by reading in Carpenter and Bowman. Pictures of South American presidents, generals, ambassadors, and other leading men help to strengthen the idea of their similarity to us.

The population groups of South America are seen to be:

1. The Latin Europeans:
   Spanish—found everywhere except in the Guianas
   Portuguese—largely in Brazil
   Italians and French—scattered very generally
2. The North Europeans:
   Germans—centers of German population in southern Brazil and southern Chile
   British—widely scattered but largely in towns
   Belgians, Austrians, Norwegians, etc.

3. Negroes:
   They are found solely in the tropical countries and are most numerous in Brazil.
4. South American Indians:
   They are found largely on the west side of the continent. There is great variation in the grade of Indians. The lowest types are those of the lowland forest regions in the tropics. The highest are probably those of Inca and Araucanian groups.
5. Orientals:
   Chinese—in Ecuador and Peru
   Japanese—in southern Brazil
   Hindus—in the Guianas and Chile
6. Mixed:
   Spanish and Indian
   Portuguese and Negro
   Many other mixtures

The mixed population is, of course, a very great factor. The grades of mixed population differ vastly in different regions.

The next problem is that of finding what attractions South America offered that brought to it people of so many nationalities. The map is first studied for suggestions. The children know of the gold in Peru and the desire of the Europeans for precious metals. The mountains suggest the probable occurrence of minerals in other places. The extent of South America in latitude suggests a great variety of products. If children are not familiar with the meaning of latitude and the inferences that can be made when the latitude of a place is known, a discussion of latitude is needed at this point. Suggested exercises are given at the end of the outline on South America. The tropical products are suggested as another attraction to Europeans because they differ so much from those of European latitudes. It is seen, on the other hand, that a tropical climate is forbidding to Europeans unless tempered by high altitude. Thus those places in tropical latitudes where highlands come near the coast offered greater attractions to Europeans than did the tropical lowlands. The fact that seasons in Southern South America are the opposite of those of Europe may make exchange of the same products desirable.

After the children have made all the suggestions they can from a study of the map, they read from Bowman, Carpenter, *The Book*

of Knowledge, etc., to confirm their inferences and get additional information. They listen also to extracts read by the teacher. A survey of the products which have figured prominently shows that gold and silver were mainstays of Spanish colonial times; that sugar, then much demanded in Europe, with some cotton and tobacco, was the mainstay of the early Brazilian colony; that gold replaced sugar in importance in Brazil for a century, and was itself replaced by coffee; that the early staples of the Pampa were hides and wool, then wool and live cattle, and then meat and agricultural products, predominantly wheat, flax, and corn; that rubber has figured as an important product from the Amazon regions for the last half-century only; that guano has been a very important factor in Peruvian progress and nitrate in the progress of Peru, Bolivia, and Chile. This study brings out one of the most striking facts in the development of South America—the dependence of large groups of people upon a single staple export for long periods of time.

This study leads to a view of the opportunities South America affords today to South Americans themselves and to the world. What factors are now operating in the development of South America? From the list of South American activities made in answer to this question, each child chooses one in which he is especially interested and makes a special study of it. Discussion up to this time has merely brought out the fact that certain industries have been or are mainstays of South American development. Details of how and why each is important are reserved for these individual reports. The general scheme suggested for the organization of each topic includes as subtopics:

The Nature of the Product
The Regions of Production
Conditions Favoring Growth or Production
Geographic Problems of Transporting and Marketing the Product

Some of the topics worked out in this way are:

The Cocoa Industry
The Coffee Industry
Agriculture in Chile
Chilean Fruit

South American Rubber
The Cattle Industry
Tin in Bolivia
Mate
South American Lumber

Before the pupils begin to study their individual topics, the class studies several South American industries and prepares reports. The following report on rubber indicates the procedure. The nature of rubber is first discussed. Pictures of the tree are shown and its characteristics noted. The region of growth is mapped. The conditions of growth are shown to be much heat and water. The Amazon Valley is seen to fulfil these conditions. Descriptions are read of the region in which rubber is found and an effort is made by the use of such descriptions and of pictures to give a clear mental picture of the setting in which the tree is found, the appearance of the river, the forests on the river banks, the trees, plants, animals, and natives of these forests, and the distribution of wild rubber trees. The processes of gathering, the "curing" or smoking of rubber, and the transportation to the ports from which it is shipped are described. Museum material furnishes examples of rubber in its various stages. Attention is called to the decline of the industry in interior regions due to the decreasing of wild supply by rapid exploitation and the increasing of the supply of plantation rubber. Manaos and Pará are described. The dependence of their very existence upon the rubber industry is stressed.

The slight demand for rubber before 1850 and the constantly increasing demand since is accounted for. The routes taken by rubber from Manaos, Pará, and other points of export to points of consumption in the United States and Europe are drawn upon an outline map of the world.

In connection with the discussion of conditions favoring growth and production of an animal or plant product, the question is raised: Why are these conditions found in these regions and not elsewhere? The answer is worked out by the class at the close of the report.

The rainfall map is first studied to find the rainfall conditions of the particular region. Surface maps and maps showing wind

directions are then studied. The conditions under which winds take up and give out moisture are discussed, and the explanation of the rainfall conditions of the regions is worked out. By doing this with many regions discussed in connection with conditions of growth of each product studied, children learn something of the relationship existing between wind direction, surface, and rainfall. The report of each individual thus becomes a basis for further class-work, and motivates the careful preparation of reports as well as careful consideration of each report by all members of the class.

Following the individual reports, a summary is made of the subject-matter studied thus far by answering such questions as: Why is South America more significant now in world-affairs than ever before? Will its importance tend to increase or decrease? Why?

A review of the lists of products and exports and imports of South America shows that it is young industrially. Its wares are those of the extractive industries. It offers to the world staple foodstuffs, raw materials for textile manufacture, metals, rubber, etc. It affords in return a market for fuels, building materials, manufactured wares, and the like.

Although the development already accomplished has made the continent very important in world-trade, many of its resources are barely tapped. As the world-demand for foodstuff increases, and exporting nations whose population is rapidly increasing cease to export, South American products will be sought with more and more eagerness. As her population increases and her industries grow, she will afford an enlarging market for the wares of manufacturing nations. Her commercial importance for these reasons is greater than ever before. With this increasing commercial importance will come a great influence in world-affairs.

The meaning of the phrase "The War after the War" is discussed, and South America's influential place in this industrial and commercial international rivalry is emphasized.

These questions next arise: Are all parts of South America equally important? If not, which parts are the more important? Why? To answer these adequately, individual countries must be compared. The more important factors which will determine the possibilities of each country are discussed. Take, for example,

Argentina. It is seen to consist of four regions varying greatly in importance—Patagonia, the Pampa, the Chaco, and the Andean section. A brief survey of these shows that the Pampa is the real Argentina and that the other regions are relatively unimportant. Can the Pampa keep Argentina in her place as one of the ten greatest nations of the world? The following factors must be considered:

The Pampa:

1. Size:
   About one fourth as large as Argentina
2. Location:
   From 30° S. to 40° S.
   From the ocean west to the Cordoba and Andes Mountains
   Well situated with reference to the command of tributary regions up river and with reference to communication with Europe
3. Topography:
   A great plain monotonous in its vast extent
4. Soil:
   Very deep. Very fertile
5. Drainage:
   Not yet well developed
   Few rivers
   Stagnant water areas and marshes
6. Statistics of production:
   Agricultural
   Grazing
   Miscellaneous
7. Statistics of commerce:
   Exports
   Imports
8. Statistics of population and immigration:
   Kind of population largely Spanish and Italians from *Northern* Italy
9. Life:
   In the country
   Haciendas—System of large land holdings unfortunate
   Guachos—
10. Cities:
    Buenos Aires
    La Plata
    Rosario
    Santa Fe

11. Transportation:
    Scarcity of navigable rivers
    Ease of road- and railroad building in so far as topography is concerned
    Difficulty of obtaining road- and railroad-building material
12. Government:
    Stability of government is stressed.
13. Reasons for the recent rapid development
14. Difficulties to be overcome:
    No fair opinion can be formed as an answer, however, until the same kind of data about other countries is examined and the same kind of view is taken of them.

Brazil is seen to outstrip all the other South American countries in size and population, and, theoretically, to surpass them in agricultural possibilities. Practically, there are many hindrances to such supremacy, such as:

Annual flooding of great areas
Problem of clearing the forests
Unmarketable quality of most Brazilian woods
Climate
Scarcity of people
Lack of means of transportation
Quality of population

Brazil's hope, at least for the near future, is seen to be in her southeast coastal region. The good climate, agricultural possibilities, latent water power, electric smelting of iron ore and what it may mean to this region, relation of the region to the cattle country in Matto Grosso and Goyaz, and other factors of this nature are compared with the many advantages of the Pampa region.

At the close of the study of individual countries, there is little difference of opinion with regard to grouping Argentina, Brazil, Colombia, and Chile in the highest class, Ecuador and Paraguay in the least promising class, and the others in an intermediate group. Debate is often necessary if a closer ranking is desired. Such a debate helps the children to list definitely for themselves those factors, geographic and non-geographic, which are favorable for the progress of a country and those which work against it.

The final question is, What should our attitude toward South America be? This brings up the discussion of the Monroe Doctrine, some of our past dealings, just and unjust, the mistakes that many of our citizens have made, and the light in which South Americans regard us.

The co-operation of North and South America, if effected for righteous purposes, will be tremendously influential in reconstructing world-relationships upon higher planes, and in helping to maintain world-peace. There is no basis for a patronizing attitude on our part. South Americans have as much to give us as we can possibly give them. The attitude of the present elementary-school children of the United States may make or mar this complementary relationship, this joining of forces for world-good that lie in the Americas. We attempt, therefore, to bring each child's responsibility in the matter home to him by showing him that he will soon be in a position to help decide South American questions. In this way a foundation may be laid for the achievement of an ideal relationship.

Throughout the reading done in connection with these topics, accurate interpretation of pictures and of the printed page is stressed, and many devices are used to secure it. If the reading is light and the meaning easy to grasp, children are asked to select for themselves the main points the author has tried to make. If it is difficult reading, hectographed questions are given them to direct their thought, as they study, to the points most to be emphasized. Expression in a different medium often serves to clear ideas. For example, when reading about the products raised at different altitudes in Peru and Bolivia, children are asked to make, *from the reading*, a diagram showing a cross-section of the region and the product grown on the various levels. Maps and pictures are sometimes drawn and models made in sand and clay *from the reading*. Such tests serve to help the child check his own accuracy in thinking and seeing.

After the study of an entire continent is completed, the children sometimes exhibit for the benefit of an outside group of people all their class work, their individual collections, maps, models, slides, pictures, museum materials, and anything which they consider to be

of interest. In order to test their own readiness for this occasion, they practice placing on the outline blackboard map the names of all countries, cities, rivers, etc., mentioned in connection with their study of South America. When they consider themselves prepared, the entire class is tested on the "place geography" by using Goode's *Outline Map of South America*. They practice explaining to one another the various things they wish to tell and correct one another's use of English. This kind of summary serves instead of a formal test of any nature.

If the class is mature enough, a little more climatological work is taken up before the study of Africa is started. The children have seen that wind direction is one factor determining the rainfall of a region. The next question is, What determines wind direction? This is worked out by studying maps showing air pressure and wind directions in various regions. The following questions and directions suggest the course of the development: What do we mean by low pressure? High pressure? How can we show low pressure on a map? High pressure? Find areas of low pressure on the map. Of high pressure. (An isobaric map is used.) What relation do the maps show between high-pressure regions, low-pressure regions, and wind directions? Why should there be this relationship? What should you need to know then in order to determine wind direction in a given place? Do high- and low-pressure areas remain the same throughout the year? How does this affect wind direction at any given place? Are low-pressure regions more common in low latitudes or in high latitudes? Where, in general, are regions of high pressure found? Explain the wind directions in South America.

If the class is not yet ready for this, it is reserved for the close of the sixth-grade work or the beginning of seventh-grade work—where it is taken up in connection with interpretation of weather maps in seventh-grade science.

A further study of latitude is made at this point.

1. On a blackboard globe the equator is drawn. The terms degree, minute, second, are explained. A pupil is then asked to put a dot on the globe to represent a place 30° N. of the equator, another 45° S. of the equator, and many others. Then ten places

are put on the globe, each of which is 10° N. of the equator. Ten more are added, then another ten, and so on till it becomes apparent to the class that when *all* the places 10° N. of the equator are shown on the globe, they form a line parallel to the equator and 10° N. of it. The parallels of 20°, 30°, 40°, 50°, 60°, 70°, and 80°, both N. and S., are then added. Practice is given in telling the latitudes of places represented by dots put on the blackboard globe on and between these parallels.

2. Individual globes, on which parallels and continents are printed, are then used. Exercises such as the following are given:

Find an important city 30° N. of the equator; one 30° S. of the equator, etc.

Find the latitude of New York, Los Angeles, Buenos Aires, etc.

From the index in Longmans' *Atlas* check your estimate of the latitude of each place. How will this index help you in the future to locate places?

Through how many degrees of latitude does Africa extend? Australia, etc.?

What continents are crossed by the fortieth parallel north? By the twentieth parallel south, etc.?

What countries are crossed by the fiftieth parallel north?

What is your idea of the temperature of a place 2° S. of the equator? 80° S. of the equator? Why? Some places near the equator have low temperatures. Why?

Explain low latitude. High latitude.

3. The representation of parallels of latitude on wall maps is next discussed. The difficulty of representing the curved surface of the earth on a flat surface is noted. The pupils find out how many ways of representing parallels are shown on these various maps. The object of the comparison is to prevent the mistake of reading latitude along a horizontal line on maps that are not made on the Mercator projection. Exercises with maps include the following:

Find from the maps in your atlas the latitude of given places.

Given the map of a relatively small region on a large scale (e.g., the wall map of Illinois) show on the blackboard globe the extent in latitude of the region shown in this map.

On the blackboard outline map of the world draw the equator, the tenth parallel north, etc.

By this study of latitude the idea of relative location is strengthened.

AFRICA

A comparison of Africa with South America is made from map study and brings out its greater size, the lower latitude of its southernmost point, and the existence of a tropical region in Africa similar in many ways to that of South America. The highland and lowland tropical regions of Africa are compared with those of South America. An outline such as the following is worked out from map study and reading.

I. Tropical Africa:
  1. The Lowlands:
    a) Countries included
      (1) Congo Free State
      (2) French Congo
      (3) Part of Angola
    b) Congo River basin
      (1) Comparison with the Amazon Basin
        (*a*) Points of similarity to be noted
          i. Position on the equator
          ii. Great size
          iii. Slight relief
          iv. Navigability of the river systems (Carpenter, p. 224)
          v. Rich plant and animal life
          vi. Rubber an important economic product
        (*b*) Points of difference to be noted
          i. The Congo basin lies at higher altitude than the Amazon
          ii. Navigation system of the Congo isolated from the coast by rapids where the river crosses the mountain rim of the plateau; therefore a railroad necessary
          iii. Animal life: several important types not found in South America
            a) Elephant
            b) Hippopotamus
            c) Rhinoceros
            d) Gorilla
            e) Lion
            f) Wart hog

iv. People
a) Bantu, a branch of the black or negro race; not the red or Indian race of South America

v. Economic products
a) Ivory from elephants
b) Palm nuts and palm oil

vi. Political control
a) European (French and Belgian possession of the Congo; of the independence of the South American republics)

2. The Highlands:
a) Countries included
(1) British East Africa
(2) German East Africa
b) Comparison of the region with the typical highlands of South America
(1) Physical conditions
(*a*) Similarities
i. Extremes of relief in tropical latitudes; therefore great varieties in climate, e.g., compare
a) Tropical Mombasa with Guayaquil, Ecuador
b) Snow-capped Kilimanjaro and Kenia with Cotopaxi or Chimborazo
c) Temperate pastures and farm lands of Uganda with the valley of Ecuador and the plateau of Peru and Bolivia
(*b*) Differences
i. Greater area of plateaus in proportion to mountains
ii. Mountain range less continuous than Andes
iii. More and larger lakes
a) Tanganyika, Nyanza, Victoria, Albert Edward, Rudolph

It is noted that desert covers a much greater part of Africa than of South America, in proportion to the size of the continent.

It is seen that, while South America is a continent of republics, Africa is one of colonies, many of which have been acquired by European powers in the last half-century. Why should this be true? When people knew of Africa so early, why was its development so late?

The vast areas of desert and of jungle, the hostility of the natives, the lack of harbors, the lack of navigable waterways leading into the interior, and the greater early attraction of North America for colonizers are cited as some of the reasons.

Why should it have been developed in recent years? Why have Europeans done the work of colonizing it?

This leads to a view of the continent as a field for the expansion of the crowded nations of near-by Europe. From the map it is seen that the interested nations are Germany, England, France, Italy, Portugal, and Belgium.

First are mapped the African regions which England has gained control of or colonized, and the problem presented is, In what ways are these colonies valuable to England? To answer it necessitates the consideration of the more important features of the various British colonies and protectorates. Egypt, the most familiar of them, is first discussed. It is pictured as a long, ribbon-like oasis due to the waters of the Nile as it flows across the eastern Sahara. The Nile presents three interesting minor problems: How can this great river be maintained across hundreds of miles of desert? Explain the annual Nile floods. In what sense may Abyssinia be called the mother of Egypt?

The Nile Valley is seen to be the seat of one of the earlier civilizations, relics of which still remain in the pyramids and many ancient mines. This fact prompts a comparison of conditions in this valley with those in the plateau or Peru and Bolivia, where early Inca civilization developed. Did similar conditions bring about these two developments? Do the same conditions give the Nile Valley value today?

The following outline suggests the points stressed in viewing present-day Egypt.

1. Location and its significance in controlling the Suez Canal
2. Nominally a Turkish possession; actually under British control
3. A land of farms. Crops:
   a) Cotton
   b) Sugar
   c) Rice
   d) Grains
   e) Vegetables
   f) Dates
4. Methods of farming:
   a) Winter crops of grain are sown in the autumn when the Nile is low
   b) Summer crops of cotton, rice, and sugar are sown in the spring before the rise of the river

c) Irrigation becomes necessary during the low-water season
(1) Various methods used: The shadoof, run by men, and the sakieh, run by oxen or mules, are used to raise the water to the level of the field. Small ditches carry it over the field. Modern methods are now being introduced by the British; the great dam at Assuan

5. People:
a) Mohammedans; a mixture of ancient Egyptians and invaders from Asia Standards of life are primitive
b) Cosmopolitan foreign population

6. Important cities:
a) Alexandria and Cairo

7. The Suez Canal—Britain's gateway to the Indian Ocean, very vital in her present scheme of administration in India and the Far East

British South Africa is next studied. Since the finding of diamonds was so significant in the development of South Africa, the story of their discovery is read, the rush of people to the region is described, and the early life of Cecil John Rhodes is told. The subject of diamond mining is outlined as follows:

Diamond mining:
1. Location: Kimberley, Orange Free State
2. Occurrence of diamonds
3. Methods of mining
4. Methods of separating diamonds from clay
5. Marketing
6. Administration of the mining camp
7. The city of Kimberley

The finding of gold and its additional influence in the growth of population in South Africa are then discussed.

Gold mining:
1. Location: Witwatersrand of Transvaal
2. Occurrence of gold
3. Methods of mining and smelting
4. Johannesburg

Other natural resources that aided the development of the regions are studied.

The industries of the coastal plains and mountain slopes on the east (Natal and Cape Colony; Transvaal and Orange River Colony) are outlined as follows:

I. Farming:
   a) Live stock and hardy grains on the upper slopes
   b) Orchards of temperate fruits farther down
   c) Tea and coffee on the lower slopes
   d) Rice, sugar cane, tobacco, lemons, oranges, and pineapples on the coastal plain
   e) Reason for such a range of products: Compare East Africa and Andes region of tropical South America
   f) Farmers, white men; laborers, natives
   g) Grain, cotton, and tobacco in Transvaal and Orange Free State. These regions are better watered because they are nearer the mountain sources of the Orange and Vaal rivers

II. Stock-raising:
   1. Cattle and sheep
      a) Conditions similar to those of the great plains of the United States, pampa of Argentina, etc.
   2. The ostrich: a desert bird native to Africa
      a) Feathers the commercial product
      b) Methods of raising
      c) Value of product

Among the centers of population are noted, in addition to Johannesburg and Kimberley, Durban, the chief port of Natal and the outlet of the gold regions; Port Elizabeth, the Liverpool of South Africa, and Cape Town.

The story of Rhodes's part in the government of the colony, the clash with the Boers, the steady acquisition of territory, and the dream of linking Cairo to Cape Town by an "All-Rail Route" leads to the account of expansion in Rhodesia, and the completion, to the southern end of Tanganyika, of the only north-south transcontinental railway in the world. Much of it must be told or read from Talbot's *Railway Conquest of the World*, Powell's *The Last Frontier*, and Mitchell's *Life of Cecil John Rhodes*. British East Africa is discussed as a link in this north-south belt of English possessions. The break in the north-south line of English control occasioned by the position of German East Africa is noted. Among the evils of territorial aggrandizement so evident in Africa is pointed out the jealousy occasioned by just such a situation as here exists.

By this view of the British colonies some of the reasons why they are valuable to Britain are made evident. Africa is seen to

be, like South America, a producer of raw materials, a consumer of manufactured articles such as England offers the world. The cotton of the Nile Valley, for example, partially frees British manufacturers from dependence on American cotton. British African colonies afford a field for population overflow. They offer problems to be solved which must contribute to the progress of the nation which solves them. They offer intermediate stations and give control of strategic points on the route to the British Far East. They satisfy the desire for empire of which Rhodes was a personification.

The great French Empire in Africa is then studied with the question in mind, Why is it of value to France? It is seen to include, with the exception of the British Sudan and Tripoli, all the Barbary states, the Sahara, and the Sudan and to occupy 45 per cent of all African territory and 25 per cent of the continent's population. A study is made of the various parts as outlined below.

I. The desert:
  1. Location and extent
    a) Covers an area about the size of the United States, in Northern Africa, from the Red Sea to the Atlantic
  2. Types of country
    a) Great stretches of sandy plains and dunes
      (1) Bare, moving sands
      (2) Sands with occasional bunches of grass and small shrubs
    b) Barren stretches of country of a more clayey soil, much dissected and broken by deep ravines and gullies
    c) Rugged, mountainous country, with more vegetation and streams in valleys; sites of oases
    d) Oases in the midst of other types noted. Rich tropical and subtropical vegetation, chiefly date palms
  3. Climatic conditions
    a) Day
      (1) Intense dry heat
      (2) Short dawn and twilight
      (3) Rapid increase of heat with sunrise
      (4) Hot wind with possible sand-storms
    b) Night
      (1) Rapid lowering of temperature after sunset, sometimes reaching the freezing point
      (2) Brilliancy of stars and moon due to dry air

4. People
   a) Classes
   b) Appearance
   c) Dress: its adaptation to desert heat
   d) Homes
   e) Life
      (1) Nomadic
      (2) Agricultural life in the oases
         (*a*) Products raised
            i. Dates the most important
            ii. All kinds of fruits and vegetables
         (*b*) Problems of agriculture
            i. Irrigating
            ii. Constant battling with drifting sand
            iii. Intensive cultivation to make best use of limited arable area
         (*c*) The date harvest
         (*d*) Rich date oases: Biskra, the Jerid
      (3) Caravan trade of the desert
         (*a*) Products of exchange
            i. Wool, camel hair, millet, etc., traded by nomads for cotton cloth, guns, and other manufactures from Europe and cities on the coast, and for dates and other fruits of oases
            ii. Ivory, gold, palm oil, rubber, etc., from interior of the Sudan taken across the desert to exchange for European goods
         (*b*) Routes of caravan trade determined by oases with terminals in cities on edge of the desert, e.g., from cities of Barbary States (Morocco, Tunis, Algiers, Biskra) through oases to others of the Soudan (Timbuctoo, Kano, Lake Tchad) and Egypt (Cairo, Alexandria, Khartum)
         (*c*) The camel the means of transportation; its adaptation to the desert

II. The Barbary States:
   1. Location
   2. Character of the country
      b) Fertile rolling country near the coast, backed by the Atlas Mountains running northeast and southwest
   3. Climate
      a) Subtropical like Southern Europe with good rainfall on the seaward slope and deserts on the landward side of the mountains

4. Resources
   a) Many agricultural products in the lowlands near the sea
   b) Wool from the pastures of the mountain slopes
   c) Minerals in the mountains
5. Commerce
   a) The gateway between Europe and the Sahara
   b) The northern terminal of the caravan trade across the desert
6. Important cities
   a) Morocco
   b) Fez
   c) Tangier
   d) Algiers
   e) Tunis
   f) Tripoli
7. Political control
   a) Morocco under French protection
   b) Algeria and Tunis, French

III. The Soudan, "The Land of the Blacks":
1. Location
   a) A broad strip of country extending from the Atlantic to Abyssinia, between the desert and the tropical forests
2. Divisions
   a) Egyptian Soudan or Nubia
   b) Central Soudan about Lake Tchad
   c) Western Soudan, chiefly the basin of the Niger
3. Character of the country
   a) Transition zone from desert to forest
4. People
   a) Chiefly blacks. Our slaves come from the southern and western Soudan
5. Commerce
   a) The southern terminals of the caravan trade, the chief products being ivory, ostrich feathers, and gums from the forest trees
6. Important trade centers
   a) Timbuctoo on the Niger
   b) Kuka on Lake Tchad
   c) Kano in Nigeria
   d) Khartum in Egyptian Soudan

The number and degree of the difficulties which the French have met successfully in their colonizing attempts become evident as the geography of the regions is studied. The fact is stressed that

France's penetration has been almost wholly pacific. It is seen that French efforts have laid the basis for a future rich and prosperous French African dominion, in spite of vast waste areas included. Even now there comes from this territory a wealth of raw materials. It affords additional markets for French wares. Untold possibilities lie in Morocco, France's new protectorate. France has many good African harbors. Algiers is the most important coaling station in the Mediterranean. By controlling Northwest Africa, French influence in the Mediterranean is strengthened. The many railroads recently built have put France many days nearer the products of the Sahara and the African tropics. If the plan of building a railway from Fez through Tuat to Timbuctoo and on to the port of Dakar is carried out, the distance from Marseilles to Rio de Janeiro will be much shortened. Thus South America too will be brought nearer France.

[*To be continued*]

REPORT ON A SELF-DIRECTED SYSTEM OF KINDERGARTEN SUPERVISION

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At the beginning of the present school year, in the absence of the customary supervisor of kindergartens, it was thought best to organize the two hundred and fifty kindergarten teachers in the public schools of Los Angeles for an experiment in self-help.

The success of this plan does not imply that it would be wise to abandon formal supervision, but it does suggest that a certain type of supervision which now discourages initiative or contribution by the teachers could well be modified so that those who actually do the teaching will feel responsibility in devising methods of instruction and direction.

Briefly, the plan adopted involves the following arrangements for visits and meetings, with emphasis placed upon the advisability of informality and especially upon the cultivation of a spirit of reciprocal helpfulness and good-fellowship.

The kindergarten teachers are divided into eleven groups, each group including teachers in adjacent schools for convenience in visiting and in holding meetings. The afternoon teachers, fifteen in number, somewhat widely scattered, constitute a twelfth group. These last teachers, by reason of great distances and late afternoon hours, are unable to realize the full benefits of the organization. The functions of these groups are twofold: to arrange a system of visits within their own number and to conduct a series of round tables, one each month, for the entire group constituency.

Each of these divisions elects one of its own number as visitor for the respective district, who shall also preside at its round-table meetings. Since the work of the visitor necessitates absence from her own kindergarten room at least two or three times each month, it is obviously necessary that the one selected should be a director of a sufficiently large kindergarten school to require the services of an assistant, who, in the absence of the director visitor, may assume

charge of the entire room. The visits of the several representatives of the groups are so timed as to secure the approval of the principal in each instance and to interfere least with the regular work of the visiting director in her own room.

No effort at supervision in the technical sense of the term is involved in the visiting, much less is any place given to criticism. The sole aim is to arouse the consciousness of a common problem and to extend to all through the medium of the visits and the round table a knowledge of the varying activities, devices, and educational materials in vogue in the several kindergartens of the group.

The round table of each district is held monthly, on a date agreed upon by the group, in the kindergarten room of one of the school buildings in that district. The holding of the round tables in the different kindergarten rooms has resulted in a distinct advantage not at first anticipated, since there has arisen a fine rivalry in the showing of interesting and original handwork and room decorations and in calling attention to new music and story-books, with the result that a great variety of suggestive contributions to kindergarten knowledge and practice have been made.

In the conduct of its round tables and in its visiting each group is thoroughly democratic. It selects its own visitor to act also as the chairman of the round-table meetings, decides upon its own place of meeting, and chooses its own subjects for discussion.

The second large feature of this simple organization is a bi-monthly meeting of the entire kindergarten force, held in a school auditorium so arranged that floor space for games and rhythmic exercises may be had by removal of chairs.

So much for the plan. During the months of November, December, and January, thirty-two meetings of round tables have been held with a total number in attendance of five hundred, an average of fifteen for each district meeting. The visitors report eighty-seven visits to as many different kindergartens during those same months. Two general meetings have given opportunity for all the teachers to come together, the actual attendance in each instance being about two hundred.

A few words about the subjects discussed and the work presented at the round-table gatherings may be of interest. The

discussions have ranged from the common problem of the troublesome child and the perplexities of unsatisfactory materials to reports of serious attempts to adjust the use of equipment to the immediate interest of the individual child, thereby breaking away from the imposition of too formal and too uniform types of work upon all the children at a given table. There have been earnest discussions on the improvement of equipment and the comparative value to the child of certain of the gifts. Excellent suggestions for the adaptation of new varieties of virtually costless "outside" materials have given such an impetus to this type of handwork that a permanent exhibit has been installed in the elementary library building to which additions will be constantly made. As instances of these inexpensive materials and the articles which may be made from them the following are mentioned: cardboard from laundry made into castles; paper sacks, jewelry boxes, and kelp converted into dolls; spools and skewer sticks made into tops; twigs and colored paper into flowers.

One of the round-table meetings is here described:

> We sat about the low tables with pencils and paper and each made a list of the ten stories she considered the best for kindergarten children. From these several lists were selected the ten accounted best to constitute a recommended list. Whenever a teacher mentioned a story not known to the others she was asked to tell the story as though to her children.

In many instances principals and first- and second-grade teachers have asked to be present and have contributed to the discussions.

That the kindergarten teachers pronounce this experiment in self-help altogether successful is evidenced by the many delighted expressions of appreciation of these opportunities for interchange of opinions and experience. The unanimous testimony is that the gatherings inspire the teachers with a delightful feeling of fellowship and a lively interest in the common problems of kindergarten work. All agree that under the spur of responsibility the teachers have worked with gratifying unanimity to improve their schools, and that the habit of waiting for orders from above has somewhat loosened its grip.

In closing this account of the kindergarten experiment a report of one of the general meetings should be given. The program was

planned and carried out by the teachers of four of the round-table districts combined. It simulated a kindergarten circle. The opening number was Oscar Wilde's story, "The Selfish Giant," told most delightfully with explanations of how the story by certain changes and abridgments could be adapted to kindergarten children.

The story was followed by a series of songs especially appropriate to springtime, sung by twenty-four teachers in circle with appropriate, illustrative rhythms. Some of the songs were chosen because they were new, and the careful rendering really served as a lesson in interpretation for the other kindergartners.

A group of circle games worked out in the same careful manner followed the songs. Some of these were old games with new suggestions in the action.

The kindergartners then adjourned to the exhibit room where had been gathered an interesting collection of handwork done in the rooms of those teachers who were responsible for the afternoon's program. The character and arrangement of the articles on exhibit had a special charm growing out of the fact that the spirit of spring was reflected throughout. On entering the room one noticed window boxes of what proved to be green crêpe paper filled with hyacinths in different shades, the latter made of torn paper gracefully and naturally arranged on twigs. Only a nearer view removed the first impression of real window boxes and real hyacinths. Butterflies on diminutive branches and paper-cut landscapes adorned the walls.

To one not initiated, the variety of objects and especially of paper-cut articles was bewildering. No kindergartners, however, manifested the slightest bewilderment. Equipped with pencil and scissors, each teacher proceeded with amazing directness to secure patterns of the particular articles which appealed to her fancy and met her needs. The practical and helpful nature of this exhibit was manifest from the eager efforts of all not to allow a single suggestion to escape them.

In a word it may be said that this community effort, undirected by superior officers, as it was expressed in the meeting and in the exhibit, was not only most creditable but also a fine confirmation of the success of this kindergarten experiment in self-help.

THE EXTENT AND MEANING OF THE LOSS IN "TRANSFER" IN SPELLING

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It is a common observation of teachers that children stumble over words in composition which have been studied and apparently brought to a high stage of learning in the formal spelling periods. With this fact in mind we designed an experiment to determine just what part of the skill gained in the column presentation of words is carried over into contextual use.

The class that participated in the experiment was Grade VI, Hart School, Stamford, Connecticut. There were 41 pupils in the class, one-third of whom were Americans, the rest largely Italians.

For the study 37 words were selected from the regular spelling lists of the grade, consisting of selections from the lists of words most commonly used by children. These had been taught as a part of a regular spelling lesson four to seven weeks previous to the test, and had been included in a review test without teaching one to three weeks preceding the test. The words also had been tested for difficulty on the Friday preceding the week in which they were taught. The 37 words were divided between the hardest and the easiest words of the preceding lessons as follows: hard words, 17; easy words, 20. The original teaching as well as the testing was done by the regular class teacher, Miss Brown. The method of teaching consisted of the study of the individual words from the board, use in oral sentences, oral spelling, and writing; but not use in written sentences.

The 37 words were arranged into column and sentence dictation exercises and were given in four tests on three successive days, as follows: Tuesday, easy dictation; Wednesday, easy column and hard dictation; Thursday, hard column.

The dictation tests were given as a part of the language lesson and an effort was made to keep the real purpose of the tests concealed. The teacher simply told the children to look over their written work for any corrections that they cared to make. The results were tabulated to show the loss in transfer, and the relation of the word-difficulty, nationality, and spelling ability to loss in transfer.

The statistical results are given in Table I.

TABLE I

SPELLING ACHIEVEMENT BEFORE TEACHING, IN THE COLUMN TEST AND IN THE DICTATION TEST (41 PUPILS)

WORDS	No.	BEFORE TEACHING		COLUMN TEST		DICTATION TEST	
		Right	Wrong	Right	Wrong	Right	Wrong
Hard	17	275	422	606	91	557	140
Easy	20	589	231	796	24	784	36
Total	37	864	653	1,402	115	1,341	176

In order to find the loss in transfer from column presentation to sentence use we must know the efficiency achieved before and after teaching, and compare with the net efficiency gained in the column drill the efficiency retained in the use of words in sentences. When we deducted, from the number of words correctly spelled in the column test, the words correctly spelled before teaching, we found that as a result of column drill 538 additional words were spelled correctly. As compared with this figure the net achievement in the dictation test was only 477 words. The relative gain is that part which 477 is of 538 or 89 per cent. Therefore, the loss in transfer is 11 per cent.

The loss is much greater for the hard words than for the easy words. In the first group it is 15 per cent, from 331 to 282 words correctly spelled. In the second group it is 6 per cent, from 207 to 195 words.

The ability of the child is a factor in the loss in transfer only in case of the easy words. For the hard words the loss is about the same, 12 words, whether the nine best pupils or the nine poorest pupils are taken. For the easy words, on the other hand, the best

pupils show no loss whatever and the poorest pupils show a loss of 11 words. When an appreciable loss was found, nearly all pupils participated in it, although not to the same extent. On the whole the loss was well distributed.

The nationality of the pupil does not seem to affect the proportional loss in dictation exercises. The difference between the American pupils and the foreigners is only a fraction of 1 per cent. Thirteen American children made 35 errors in the column test and 54 errors in the dictation test. Twenty-eight foreign children made 80 and 122 errors in the corresponding exercises.

DISCUSSION AND APPLICATION

The results differ noticeably from the results of all previous investigations and therefore demand some explanation. Cornman, who first studied the subject, concluded that there is little if any transfer from column to dictation exercises. Wallin contradicted this statement and went to the other extreme, saying that the loss in transfer does not amount to over two words in a hundred. Cook and O'Shea tend rather to confirm the conclusions of Wallin. They say that the loss in transfer is about 5 per cent.

Cornman's conclusion, of course, is not supported by the careful and precise measurements which a scientific study demands. Wallin and Cook and O'Shea neglected to take into consideration the extent of the children's knowledge of the words before teaching. All words known to the children before teaching began were treated as if they had been learned as a result of the specific spelling drill (when Miss Brown and I did the same thing we found the loss in transfer to be only 4 per cent).

The loss in transfer of this group of words is of course very slight, so that the number of words correctly spelled in both tests was very much increased while the number misspelled in both tests was scarcely changed. The effect is to make the loss in transfer appear to be much less than it really is. If Wallin and Cook and O'Shea had subtracted the words already known to the children before comparing the gains in the two forms of testing, it is probable that they would have obtained results somewhat similar to the results of this experiment.

The loss in transfer from column presentation to use in sentences is a real one, neither so large as to justify the statement that there is little or no transfer, nor so small as to be negligible. The practical question for the teacher is, What are the pedagogical implications of this fact? The answer to this question is a long story, of necessity condensed here.

In the first place, it is not a question of finding a substitute for the column method of presenting words. No one has ever found a method of teaching that would take the place of a good drill exercise, involving taking the word out of its setting and studying it in isolation. It does mean that some modifications of the usual drill exercise should be made in order to guarantee greater facility in the use of words in context.

The chief difficulty of our teaching has been that it has stopped short of the actual mastery of words. We have been satisfied with a high degree of efficiency in column tests and a scheme of reviews which would keep the efficiency up to a comparatively high level as revealed in these tests. This is all right in its place, but it does not go far enough. Spelling words in context is more than spelling words in isolation. In the latter case the child's whole attention and effort are directed against getting each letter in its proper place. In contextual use, on the other hand, the attention is mainly given to thinking and the selection and placing of words. Attending to the ordering of letters is a burden on thinking. To be of practical value spelling must be carried to the point of free and accurate use in writing.

It is conceivable that this could be accomplished in column drill alone by bringing spelling to a stage of easy perfection for all pupils. But this probably would be wasteful of time and energy as well as unhealthful. It seems more sensible to supplement the regular drill work by the use of words in written sentences, dictation, and the like. Inasmuch as it involves a higher degree of skill than isolated spelling, it should come toward the end and after the isolated drill period. For example, in the seat work, after the presentation of the word to the class and class study, the child may well be required to use the word frequently in written sentences. Also, tests and reviews might well take the form of dictated exercises

in order to provide more frequent contact with the words to be mastered than the ordinary work of the school and life provides.

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THE USE OF STANDARDIZED MATERIALS IN ARITHMETIC FOR DIAGNOSING PUPILS' METHODS OF WORK

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That there are many defective methods of working arithmetical problems involving the four fundamental operations is evident to anyone who has tabulated the results of an arithmetic test. So long as arithmetical work is carried on by means of relatively unclassified lists of problems, there is difficulty in locating with precision the particular defects that make the work of many pupils cumbersome. However, as soon as carefully selected problems are presented to a pupil, the precise nature of his difficulty is often readily discovered. The purpose of this article is to set forth some of the methods found in the work of individual pupils of Grades IV to VIII and to suggest possibilities for aiding such pupils.

The method of diagnosis.—The method followed in the cases to be described was carried on in connection with the use of the Courtis practice lessons. These lessons offer an opportunity for making a careful analysis of the way in which pupils do their work in arithmetic. That is, as soon as a pupil fails to do one of the lessons in five or six days, a case for diagnosis presents itself. This pupil should be taken to a quiet part of the building and, by means of the practice lesson upon which he has been working, be diagnosed. The lessons are particularly well adapted for diagnosis, because combinations of varying difficulty are placed side by side. This makes possible a study of the child's methods while allowing him to work the problems in their regular order. One great advantage of this is that a more nearly normal response is secured than would be if skipping around were necessary; another is that pupils especially needing attention can be allowed to start across the page and work both easy and hard problems, thus showing their ability in both kinds of problems.

In actual diagnosis this last-mentioned factor is especially important. For example, if a pupil is working the fourth row of problems in the first lesson, he may do the first three problems rather easily, but the fourth and fifth problems with 9–6 combinations will present such difficulty that there will be marked retardation. If his confidence has already been secured by the person testing, queries concerning his methods of working these problems may be made. Then the following problems may be worked; the next two will probably be "easy." The ninth problem in this row has a 9–5–4 combination; this is likely to slacken the speed again. And so on through the list, one may, as a rule, question to find out the method whenever a problem is worked very much more slowly than those problems which are "easy." The character of the diagnosis will be much the same in case the pupil's breakdown has occurred with any of the other lessons.

Pupils' methods of work.—The findings as to methods employed by pupils in "difficult" combinations is both interesting and significant. The following methods were found in the work of pupils who were tried out in the manner just described. A fourth-grade boy showed by slow work that the combination 9–7–5 was difficult for him. When questioned, he showed that he used a common form of "breaking-up" the larger digits. In working the problem, he said to himself: "9+2+2+2+1=16 and 21." This shows that the 9–7 combination was not known, but that the 16–5 combination was, inasmuch as he arrived at "21" directly after having combined the other two numbers. Another boy of the same grade showed the same type of difficulty in a more pronounced form. He added 8, 6, and 0 as follows: "First take 4, then take 2, then add 8 and 4—makes 12, and 2 makes 14." In adding 9, 7, and 5, he said: "9 and 3 is 12 and 4 is 16 and 2—18; and 2—20; and 1—21." He broke into parts even so easy a problem as 3+4+9, adding 9+3+2+2=16.

A pupil from the fifth grade presented a quite different method of adding. In adding 4, 9, and 6, she explained: "Take the 6, then add 3 out of the 4. Then 9 and 9 are 18, and 1 are 19." Other problems were worked similarly: one containing 3, 9, and 8 was solved as follows: "8 and 8 are 16 and 3 are 19 and 1 are 20";

5, 6, and 9 as follows: "6, 7, 8, 9, and 9 are 18 and 2 are 20." This tendency to build up combinations of 8's or 9's continued in the case of another problem: 6, 5, and 8 were added thus: "6, 7, 8, and 8 are 16 and 3 are 19." Probably her first problem was worked similarly, but I had to have her dictate her method twice before I understood; she then gave it as quoted.

Methods which are quite as clumsy are found in the case of subtraction. One boy of the fifth grade was found to build up his subtrahend in the case of many problems. For example, in subtracting 8 from 37, he increased his subtrahend to 10, then obtained 27, and finally added 2 to 27 to compensate for the addition of 2 to 8. Likewise, in subtracting 7 from 30 he added 3 to 7 and proceeded as before. This boy knew certain combinations very well, but did problems containing other combinations by a method much harder than the correct one.

Even greater resourcefulness was shown by a fifth-grade boy who found the differences between some numbers by first dividing, then noting the remainder or lack of one, then multiplying, and finally adding to, or taking from, the result as necessary. For example, in subtracting 9 from 44, he proceeded as follows: "Nine goes into 44 five times and 1 less; 4 times 9 are 36, minus 1 equals 35." That is, this boy knew certain multiplication combinations better than he did certain subtraction processes; therefore, he used multiplication, making adjustments either upward or downward as demanded by the problem.

In addition to the use of such methods as have been described, many pupils fail to make progress merely because of lack of speed in the use of proper methods; others "count" silently; a very few count on their fingers; some have to go from certain points in the multiplication table in order to find the needed product or quotient. These methods as well as those described have at least two serious defects: (1) the danger of making errors is greater than in the use of simpler methods, owing to the larger number of operations involved; (2) for the same reason, the speed of working is greatly reduced.

Remedying the defects.—In making use of the results of diagnoses, it is often found to be valuable to the pupil to show him that

another method is more effective than the one he is using. This can be done by timing him while he works several problems in his own way and then drilling him in the use of a correct method upon the same problems or different ones, finally returning to the problems first worked and timing him again. There is practically no danger of failing to secure an appreciable gain in time. Interest in the lessons is sufficient to insure at least an attempt upon the part of the pupil to use the better method. Further individual drill is, of course, the kind of training that is needed.

The practice lessons themselves should be used in the individual drill work. Mere repetition, supplemented by attempts to beat one's own record, usually results in automatizing the troublesome combinations in from three to five days. The drill periods need to be in the early hours of the day and should be brief and snappy; few of the pupils needing drill profit by a period longer than ten minutes. Occasionally, a pupil is unable, even with drill, to do certain of the lessons; also, some pupils are unable to write the answers rapidly, but are able to give them orally; as there are few of such cases, those pupils should be advanced to succeeding lessons.

Many more methods by which pupils work problems might be found; enough have been cited to show the presence of subterfuges which are employed to conceal lack of knowledge of, and ability to use readily, the proper methods. That individual attention is needed in case of many slow pupils is not open to question; only through such attention is it possible to treat the specific difficulties of these pupils. That such attention will produce the desired result has been shown in the case of scores of children who have been drilled by the writer. Marked improvement is always shown in the ability to work the standardized lessons and to make better scores in standardized tests. The other arithmetical work of pupils is usually reported upon as improving, although the immediate effect of specialized drill is not always apparent; it is often found, however, that the simple lessons are the means of locating a difficulty that has retarded seriously a pupil's general progress. Such lessons show just how far a pupil *can* go and also just the kind of drill that *he* needs. They enable the teacher to deal directly with the precise form of the mechanics of arithmetical work that stands in need of improvement.

EDUCATIONAL WRITINGS

I. SUMMARY OF THE LITERATURE IN SCIENTIFIC METHOD IN THE FIELD OF CURRICULUM-MAKING

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An attempt is being made at the present time to develop a technique of scientific method appropriate to the different types of work that are to be carried on in a well-developed school system. For a great many years our educational laboratories have been scientifically testing out the educational efficacy of different methods of teaching. Our Bureaus of Educational Measurement have been finding ways of determining in a scientific manner the nature and the significance of the results that are being obtained in the classroom. Scientific methods are likewise being applied to cost-accounting, budget-making, child-accounting, grading and promotion, etc.

In educational work, however, a primordial thing is the curriculum. This really must be the starting-point of everything that goes on within the system. If the curriculum has not been scientifically determined then there is a large degree of fatuity in attempting to apply scientific methods to the processes involved in carrying on the prescribed work.

The curriculum, however, relates to the ultimate purposes of education and our profession is not thus far agreed as to these ultimate purposes. But of one thing we are certain. The curriculum must relate to the current needs of men and women in the multifarious affairs of an active world. It must be designed to fit the growing generation for an effective performance of the activities involved in these affairs. The curriculum cannot, therefore, be discovered within the classroom, nor from anything that goes on within the school system. It must be discovered in the needs of men and women in their endlessly complicated world of active affairs. School men must go out of the schoolroom, in fact outside of the school system, to discover the elements that are to be included in the courses of training. Scientific method applied to the curriculum cannot therefore be a simple matter of the scientific laboratory, of classroom research, of schoolroom records and measurements, etc. It must be a technique of determining the needs of men within the various fields of their activities.

In the development of the necessary technique of scientific curriculum-making our profession has been making rather rapid strides during the past

five years. We are discarding our older crude methods of generating a curriculum out of personal opinions, out of some narrow, special, educational philosophy, or merely borrowing courses of study made by others and handed on through the channels of tradition and indolent imitation. We are learning that curriculums are not to be *made;* they are to be *discovered.*

In enumerating some of the articles and books that reveal this rapidly developing movement, for the sake of some completeness, we shall refer to certain writings that have for some time been well known to the leaders of the profession. They seem not yet, however, to be altogether appreciated in their bearing upon the general problem of scientific method in the field of curriculum-making. In referring to these better-known studies our purpose is to point out their relationship to the more general problem.

Of the old-line subjects it is spelling that has up to the present time received the greatest amount of attention. This is probably because of the relative simplicity of the problems. Quite a number of studies have been made by way of discovering those common English words that actually or probably enter into the written vocabulary of people in general. One of the first of these studies appeared in a pamphlet entitled *Six Thousand Common English Words,* by Mr. R. C. Eldridge (1911). Mr. Eldridge made an analysis of the vocabularies of 250 different articles found in four issues of four Sunday newspapers published in Buffalo. He discovered a total vocabulary of 6,002 different words. These he set forth as a proper spelling-list, since, as he assumes, the vocabulary of everyday life and that of the newspaper are in all probability practically identical. This unproved assumption is a weak point in his method. He has tabulated the words which reporters and editorial writers must be able to spell. He has not actually tabulated the words which men and women in general are called upon to spell in the written work which they themselves produce. For most individuals this is not large in amount. It is extremely probable that the number of words which they need to spell for this writing is very considerably less than the number to be found in their reading vocabulary, which may well approximate that of the usual newspaper. Mr. Eldridge secured objective evidence as the basis of his word-list; but he went to the wrong place to secure his evidence.

A second well-known study is Mr. Ayres's *Spelling Vocabularies of Personal and Business Letters.*[1] He tabulated the words written by 2,000 different individuals in 2,000 short letters and found a total number of 2,001 different words. He went to the activities of men and women in the world of affairs and discovered their needs within those situations where spelling actually functioned. It may be objected that he chose too restricted a field of functioning for his purpose; that men and women are called upon to spell in the writing of more things than personal and business letters; that business letters tend to be

[1] *Spelling Vocabularies of Personal and Business Letters.* By L. P. Ayres. New York: Russell Sage Foundation, 1913.

rather stereotyped and to employ but a meager vocabulary; that in tabulating only the first word of every line in the letter many words escaped that would have found a place had all words been tabulated; and that, therefore, the list is too incomplete for a spelling curriculum. Even should there be some degree of validity in these various objections, his study exhibits the application of objective, impersonal, scientific methods to the problem of discovering the list of words that actually function in the adult world.

The same type of study was carried out by W. A. Cook and M. V. O'Shea and the results published in a book entitled *The Child and His Spelling.*[1] They tabulated the vocabulary employed in the family correspondence of thirteen adults involving a total of some 200,000 words. They discovered a list of 5,200 different words. While the general outline of their method is sound, it must be again noted that they also have studied the spelling function in too restricted a portion of the adult world. Scientific method demands that we secure an adequate sampling of the writing of all kinds on the part of all social classes, by way of formulating the curriculum of spelling instruction that is to be given equally to all.

The most elaborate scientific study of the vocabulary of spelling was made by Professor W. Franklin Jones and published in his *Concrete Investigation of the Material of English Spelling.*[2] He and his collaborators encouraged 150 children in each of the grades from the second through the eighth, or 1,050 children in all, to write letters, compositions, reports, etc., on all sorts of subjects until each student had used in his writing practically his whole writing vocabulary. About 75,000 papers were gone over and approximately 15,000,000 words tabulated. After omitting words used only one or two times in a grade, he discovered 4,532 different words, distributed as follows:

Second grade	1,927 words
Third grade—new words added to second-grade list	469 words
Fourth grade—new words added to third-grade list	442 words
Fifth grade—new words added to fourth-grade list	432 words
Sixth grade—new words added to fifth-grade list	425 words
Seventh grade—new words added to sixth-grade list	419 words
Eighth grade—new words added to seventh-grade list	418 words
Total	4,532 words

Since this study was published Professor Jones has been working upon the writing vocabulary of high-school and college students with the expectation that he can present a functioning list of words appropriate for each of the stages of development.

[1] *The Child and His Spelling.* By W. A. Cook and M. V. O'Shea. Indianapolis: Bobbs-Merrill Co., 1914.

[2] *Concrete Investigation of the Material of English Spelling.* By W. Franklin Jones. University of South Dakota, Vermilion, S.D., 1914. $0.10.

We are here mainly concerned with the validity of his method. It must be kept in mind that school life and the writing that goes on during this period do not exist for themselves, but as preparation for the activities of adult life. It may be assumed that the vocabulary needed for the preparatory activities of school life must necessarily be about the same as that needed for those activities of adult life for which the schools prepare. Doubtless this assumption would be valid if all school activities were closely knit up with the community life, a condition which does not exist in any adequate degree as yet. School life at the present time exists pretty largely in isolation from community life. To analyze, therefore, the things that go on within the classroom by way of finding the things needed by adults in the world of practical affairs is a very insecure method of focusing the curriculum so as adequately to meet community needs. Professor Jones's heroic study is probably the most valuable single one yet made in the field of spelling. Yet it must be confessed that it cannot represent the final word since he has not applied his scientific methods to the wide and varied field of adult functioning.

A more recent study is that of Professor Hugh Pryor entitled "A Suggested Minimal Spelling List."[1] He takes the lists of Jones, Ayres, Eldridge, Cook and O'Shea, the lists used in making Ayres's measuring scale, the arbitrary lists of certain specially devised spelling books by Hicks, Chancellor, Studley and Ware, and two or three other lists more or less arbitrarily prepared, from which he has compiled a composite list. He presents this composite list as a suggestive minimal spelling list.

The validity of his method must be largely measured by the validity of the method employed in drawing up each of the many individual lists of words from which his own is made. Some of these represent nothing more than the arbitrary judgment of individuals or committees. One is a newspaper vocabulary. One of those concerned indirectly, through Ayres's spelling scale, is a list of the 350 words most commonly used in the English Bible and certain English classics. Two or three of the lists are like those of Professor Jones and represent children's vocabularies as exhibited in their compositions. If all of the twelve or fifteen studies he used had been of the type of Ayres's and Cook and O'Shea's, each of them presenting some partial aspect of spelling functioning in the adult world, then the list that he presents would doubtless be better than any one of the partial lists. Using, however, several compilations that are not scientifically valid it is probable that the composite list is not as good as certain individual lists. Certainly his *method* is not as good.

As a matter of fact, the application of scientific method to the problem of drawing up a curriculum in spelling involves so complicated a task that it cannot be adequately carried out by any single man, or even any single educational group. The time has come, however, when our profession should

[1] *Sixteenth Yearbook of the National Society for the Study of Education*, Part I (1917), pp. 73–84. Public School Publishing Co., Bloomington, Ill.

consciously make decision as to what constitutes scientific procedure in the solution of the problem, and should then proceed with the large co-operative professional task of accomplishing the work. Enough has been done, in the pioneer studies referred to, to point the way.

Another field in which the professional leaders are attempting to work out a scientific method of discovering the curriculum is that of grammar. In this field it appears that Professor W. W. Charters has done one of the most important pieces of pioneer work as recorded in his *A Course of Study in Grammar Based upon the Grammatical Errors of School Children of Kansas City, Mo.*[1] He proceeds upon the assumption that the purpose of grammar is the elimination of errors in the oral and written speech. He assumes that an individual masters his mother-tongue mainly from unconscious imitation as he hears and uses language in association with his fellows. Here and there, however, either he fails to imitate sufficiently for entire correctness or there is a certain degree of imperfection in the language of his associates which he unconsciously imitates. In either case here and there he makes mistakes. Now there is no need of giving him information concerning grammatical relationships of his speech in so far as he makes no mistakes. It is needed only where the mistakes are made.

Starting with these assumptions one would suppose that the study would aim at securing a list of the grammatical mistakes that are made by the adult world, and especially that portion of it which has not secured adequate grammatical discipline; we should thus seek to discover just what aspects of grammar need to be made to function better in adult speech. Instead, however, of analyzing the speech of mature men and women, the study set out to discover the errors made in the oral and written speech of intermediate and grammar-grade pupils in the public schools. The teachers were asked to carry a notebook constantly for five days and jot down every grammatical error made orally by any pupil in their presence. They were asked also to examine all written work handed in during a period of three weeks by way of discovering all of the errors made by the children in their writing. It was discovered that the children made twenty-one types of errors in their oral speech and twenty-seven types in their written work. Thus far the study proceeds on the basis of objective evidence. At this point it is handed over to the personal judgment of the investigator. On the basis of the twenty-one or twenty-seven types of errors he presents the grammatical rules which in his judgment, if followed, will serve to prevent the occurrence of those errors. He also presents the additional grammatical information which in his judgment appears to be necessary for a proper understanding of these twenty-one or twenty-seven grammatical rules. This body of grammatical information then makes up the minimal essentials of a course of study in grammar.

[1] Bulletin, Education Series No. 9, University of Missouri, Columbia, Mo., 1915, pp. 45. Out of print.

Since this study appeared similar studies have been made upon the errors of school children in northern Illinois, Boise, Cincinnati, Speyer School, Bonham, Tex., Columbia, Mo., and Detroit. A composite report of these studies is presented by Professor W. W. Charters in an article entitled "Minimal Essentials in Elementary Language and Grammar."[1] In all of these studies the same types of grammatical errors are discovered. They do not always agree as to the relative frequency of the different types of errors, but since the purpose of the grammatical teaching is the elimination of all kinds of errors that occur with an appreciable degree of frequency, minor discrepancy is of no practical consequence.

It will be observed that the method employed in these studies in the grammar field is very different from that employed in the spelling field, in the latter of the studies referred to. In the spelling studies the attempt was made to discover the entire list of words that function in the writing of the children. The purpose is to devise a program of direct training that involves in a positive way all the things that function in one's normal spelling activities. The grammar study in quite the reverse way makes no attempt whatever to discover all of the grammatical relationships involved in the language of the children. It does not aim to give direct conscious training in all the forms of functioning. It expects to leave most of the training to indirect unconscious learning and to make conscious only that minimum quantity of functioning where the pupil or adult must be watchful against error. This also is a positive program, but it is a very different type of program and springs from a more mature and complete type of educational philosophy. Professor Jones recognizes the validity of this plan of work as shown by his elaborate study of the spelling errors found in the compositions. It is not improbable that a study of the errors made in spelling will be of more practical value for curriculum-making in spelling than a study of the entire writing vocabulary.

Owing to the definiteness and relative simplicity of the field of elementary- and high-school mathematics, one might reasonably expect to find here some good examples of the application of the method of objective analysis of adult needs as the basis of courses of study. As a matter of fact, however, one finds very little work of this character. Practically everywhere courses of study in arithmetic and high-school mathematics are made up on the basis of guess, personal opinion, or a combination of the two. No attempt has been made to secure objective evidence as to the nature of the mathematics that actually functions in the affairs of the adult world. The reports of the International Commission on the Teaching of Mathematics entitled *Mathematics in the Elementary Schools of the United States* and *Mathematics in the Public Secondary Schools of the United States* merely present summaries of current practices. They make no contribution whatever to the solution of the problem of scien-

[1] *Sixteenth Yearbook of the National Society for the Study of Education*, Part I (1917), pp. 86–110.

tific curriculum-making in this field. They give little evidence of being aware of the need of the development of such technique prior to the formulation of courses of study.

One of the notable contributions was that by President W. A. Jessup entitled "Current Practices and Standards in Arithmetic."[1] He secured the judgment of almost one thousand school superintendents as to the arithmetic topics that should be eliminated, those that should receive a diminished emphasis, and those that should receive an increased emphasis. Such study is based upon the presumption that superintendents are well informed as to the mathematical processes that are and need to be carried on by the adult population of the different communities. There are reasons to think that this assumption is not as well founded as we should wish. Superintendents have general impressions in the matter, rarely do they have accurate information.

The modes of procedure and the results of somewhat different types of work are presented in an article by Professor G. M. Wilson entitled "A Survey of the Social and Business Use of Arithmetic."[2] The article presents two types of study, each of which is suggestive as to methods of curriculum-making. The first study described was made when he was superintendent of schools in Connersville, Ind. He sent out a letter to the business men of the community in which he presented to them a list of arithmetical topics with the request that they mark those that should be eliminated, those that should receive diminished emphasis, those that should receive increased emphasis, and those not hitherto taught that should be taught. The business men were to mark the topics on the basis of their practical experience. As a result they voted to eliminate such topics as troy weight, apothecaries weight, longitude and time, surveyors' table, greatest common divisor, and a dozen others. They voted to incorporate such topics as saving and loaning money, mortgages, modern banking methods, building and loan associations, investing money, and quite a number of others. This plan attempts to discover the actual mathematical functioning. But the judgment of these men, naturally, was very considerably distorted by their traditional ideas obtained during school days as to what should be included in the arithmetic. It is a long step in the direction of good scientific method, since it is a step in the direction of a determination of the actual reality to be found in the adult world. It must be admitted, however, that the opinions of business men do not always constitute reliable scientific evidence.

The other study made by Mr. Wilson presents a much nearer approach to good method. He conceived a plan of having adult men and women make note of the mathematical operations which they themselves performed during

[1] *Fourteenth Yearbook of the National Society for the Study of Education*, Part I (1915), pp. 116–30.

[2] *Sixteenth Yearbook of the National Society for the Study of Education*, Part I (1917), pp. 128–42.

a period of two weeks. By having the pupils of the sixth, seventh, and eighth grades collect the problems from their parents, he found it possible to secure reports from 1,457 different individuals in eighteen school systems, city and rural. The individuals belonged to about one hundred different occupations. They contributed some 5,036 different problems. It was possible from these actual problems solved to discover the kinds of addition, multiplication, subtraction, division, common fractions, decimal fractions, interest, and other problems that individuals are actually solving in their current affairs. He discovered the topics to which practical application of the arithmetic was actually made. It is not a final piece of work, since it is too slight, refers to too restricted a group, and is for too short an interval of time. In general outline, however, it presents the most highly developed type of scientific technique yet presented to the profession for curriculum investigation in the mathematical field. To carry it out, he leaves the classroom, the traditional textbook, and all the mathematical traditions behind him. He goes out into the actual world of affairs to discover the mathematics that people are actually using. He suggests that the forms of functioning discovered are the things in which they need to be trained. He was making only a study of the arithmetic. The plan is one that can be applied equally well to a discovery of the algebra, the geometry, and the other mathematics needed by the world in general, or by any specific class.

From this illustration, especially, it may appear that scientific curriculum-making aims at a narrow utilitarianism. This, however, is not and cannot be the case. It cannot be scientific except as it looks to all forms of functioning within the world of human affairs. So far as mathematics functions indirectly this type of functioning must be discovered as completely as that which is direct. So far as mathematics is found to be a desirable leisure occupation, or a functioning disciplinary occupation, it needs to be considered no less than when it appears in connection with one's vocational labors.

In developing courses of training in the field of vocational education our profession has been relatively untrammeled by tradition and has been therefore free to develop and employ good scientific methods in drawing up the courses. One of the best examples is to be found in the recent *Report of the Indianapolis, Ind., Survey for Vocational Education.*[1] It began by analyzing the community into the various occupational groups of which it is made up. Special investigators were then delegated to make a careful study of the situation as regards each of these important vocational classes. The report presents a large number of tables which show for each vocational class the various operations which members must perform and for which they must through training receive the requisite knowledge and skill. A second column enumerates the "Knowledge about Jobs and Materials." A third makes a list of the tools and the materials

[1] Charles H. Winslow, State Board of Education, Bulletin No. 21, Indianapolis, 1917. 2 vols. Pp. 400, 527. A limited number for distribution.

which they must understand. A fourth column presents a list of the general knowledge of technical processes which each worker must possess in order to do his work efficiently. A fifth presents a general outline of the mathematics which they must know rightly to understand the various operations and to perform their labors. A sixth column presents in general outline the science which they need, and a seventh the elements of drawing and design. It is possible that these tables are very incomplete; that they do not list very many things which need to be included in the training of these various vocational workers. There seems, for example, to be omission of certain necessary social, economic, sanitary, and civic studies that relate intimately to the vocations. In general outline, however, and in intention the method appears to be scientifically sound. It seeks primarily to secure objective evidence as to those adult activities for which the schools must train. It includes nothing but that for which an affirmative case can be made out previous to its inclusion in the curriculum. It has nothing to do with mere opinions, with educational tradition, with special and partial educational philosophies. Its conclusions can be verified by other investigators working entirely independently. It must be admitted that this is a pioneer piece of work and perfection is not to be expected in this stage of the development of scientific methods. It lays the foundation for further improvement. Since this report probably represents the high-water mark of good method in this field, there is no need here to refer to those previous reports of work in other cities which represent earlier stages in the development of the method.

Attempts are being made to make application of objective methods in the formulation of courses of training in the field of the social studies. An interesting example is that reported by Professor W. C. Bagley in his article "The Determination of Minimum Essentials in Elementary Geography and History."[1] The first study reported in this article, on geography, starts out with the assumption that geography functions largely in one's reading of newspapers and magazines which deal with the social world of current affairs. Rightly to appreciate the news of the day, one must understand the geographical setting of the various events. It is not necessary to understand those portions of the earth where nothing is going on; where little is going on little geographical information is needed; where much is going on more information is needed and it is more essential that it be well in hand. Through his graduate students, Dr. Bagley therefore made a study of the geographical references found in the large number of newspapers and magazines distributed over a series of years. They tabulated the frequency of reference to different countries, different cities, rivers, oceans, seas, straits, etc. They tabulated references to place geography, political geography, industry, commerce, products, races, customs, religions, education, etc.

[1] *Fourteenth Yearbook of the National Society for the Study of Education*, Part I, pp. 131–46.

The historical references in the same article were also tabulated as a means of discovering the type of historical information that was actually functioning in the reading life of the population. He made the discovery in this wise of the names of the historical personages most often alluded to, of the historical topics and events, historical periods, etc., most often employed in current newspaper discussion.

Professor Bagley claimed no finality for his results, nor even for the validity of the method. It is presented as a suggestion of method. It can be seen, however, that it goes outside of the textbooks, and the classrooms, and the school environment in general, and attempts to make discovery within the world of adult affairs itself of the modes of functioning of geography and history. It seeks objective evidence. These are marks of good scientific method. It is probable that it looks too much to merely the direct modes of functioning and insufficiently to a far more important indirect functioning, which does not appear on the surface. It further is clearly the analysis of too restricted a field of human activity. Men do many things besides read newspapers for which historical and geographical experience is needed as a background. This is, however, merely to say that the study is a pioneer one and attacked only a small portion of the field. As an illustration of method, however, the suggestion appears to be excellent.

In the same article Professor Bagley reports a curriculum questionnaire study on history. He asked 150 members of the American Historical Association to select the twenty most important dates from a list of fifty-two which he submitted, and to rank them in the order of their importance. As an outcome of the study, he presents what purports to be the twenty most significant historical dates. These, however, represent only the consensus of opinion of specialists in a particular field who as a matter of fact make no great pretense to an understanding of the social thought or needs of the present generation. They do not really know any more than the laymen what actual history is functioning in the minds of the present generation. This study failed to get outside of the academic atmosphere. It attempts to discover the curriculum within the confines of the fields of education in general. It is not there to be discovered. The plan appears to present little suggestion for scientific method.

The feeling is rather widespread that it is possible to make discovery concerning, or at least to throw important light upon, the proper content of the curriculum by an analysis of the textbooks employed in the field of a given subject. One of the most carefully wrought examples of this type of study is one for which Dr. Bagley is responsible, entitled *The Content of American History as Taught in the Seventh and Eighth Grades.*[1] The study presents an elaborate and accurate analysis of the topical content of twenty-three American history texts published in the past fifty years, representing four rather distinct, successive periods of publication. An attempt was made to discover the trend

[1] Bulletin No. 16, University of Illinois, School of Education Studies, 1916, Urbana, Illinois.

of development during these fifty years, as regards references and bibliographies, questions, outlines, problems, style of treatment, the use of anecdotal material, pictures, maps, etc. The percentage of space given to each of the many historical topics treated in the various histories is then presented in a series of detailed tables. In connection with the tables representing the major historical stages in our national history is presented a list of the names of the great personages who figured most prominently in the history of each period. In amount of labor involved, the study is of heroic size. Its accuracy is unquestionable. It presents an interesting body of facts as to *what has been going on* within the curriculum of elementary United States history. It does not, however, present any suggestions for scientific method in curriculum-making. The study employs a rigorous type of scientific method in the organization of its data. It is handling data, however, from a source that throws no light whatever upon the historical needs of the population. As a piece of historical research the study is valuable.

A study of an analogous type is the determination of the consensus of practice from a tabulation of the data found in a large number of published courses of study. An example of this type is one for which the present writer is responsible, entitled "Library and Supplementary Reading Books Recommended for Use in Elementary Schools."[1] The printed courses of fifty important American cities were examined and all supplementary reading recommendations tabulated by grades. The article, therefore, presents a list of the books most commonly used in the first grade in the order of their frequency, the list for the second grade, etc., through all of the eight grades. This purports to be an attempt to discover what ought to be from what actually is going on within the field. It presents a consensus of judgment. The study doubtless has certain values in pointing to the grade in which any given book might be placed after it has been chosen for the curriculum. The study, however, presents no basis on which to make the original choice of the books. It is, again, an attempt to discover within the classroom what ought to be going on within the classroom, when as a matter of fact the reading experience which should be prescribed for the development of children is not to be determined from an examination of that experience itself, but from an analysis of the world of affairs in which that reading experience is expected to bear fruit.

Attention is called to these two unfruitful types of curriculum study because of the frequency with which these methods are actually employed. They make good research problems; they have a value; but it must be kept in mind that the results reveal the nature of the past, not the needs of the present or of the future. They are historical studies, not forward-looking, practical, curriculum-discovery studies.

[1] O. F. Munson and J. H. Hoskinson, *Sixteenth Yearbook of the National Society for the Study of Education*, Part I (1917), pp. 33–57.

II. COMMENT ON CURRENT EDUCATIONAL WRITINGS

1. *A new summary of standard tests.*—The measuring movement in education has developed a voluminous literature. Recently school men have felt the need for a systematic organization of the tests and scales which have come from the activity of the measurers. During the last year several rather complete annotated bibliographies have been published and two textbooks have come out. The editor has criticized the latter on the following counts: (1) they have not selected the best representative scales and standard tests to put before teachers; (2) they have included almost no evaluation of the tests; (3) they have not shown how they can be used to improve teaching in a definite way; and (4) they have not supplied school people with complete bibliographies of the tests and scales that are available.

Educational tests and measurements by Monroe, De Voss, and Kelly[1] we recognize to be an improvement on the previous two textbooks. It is a brief textbook which aims to place in the hands of school teachers and administrative officers a summary of the tests and scales which have been published to the present time in each of the elementary- and high-school subjects of study. A brief chapter is given on the inaccuracy of present school marks, to introduce the need for quantitative measurement in school practice. Following this the tests are presented in the next six chapters by subjects—arithmetic, reading, spelling, handwriting, language, and the high-school subjects. The material is organized in each chapter under a fourfold scheme: (1) a brief discussion of the problem of testing abilities in the subject of study in question. This, on the whole, is very brief and hardly an adequate analytical treatment of that problem. (2) The presentation of each of the standardized tests and scales which has appeared for the measurement of abilities in that subject. It should be pointed out that no detailed principles are laid down for the critical evaluation of the scales in question. Neither do the authors make such critical evaluation; the presentation aiming to be thoroughly informational. This aim is carried out to the extent that a non-technical presentation is given of each of the tests. The authors do not reprint the scales and tests in full, but select typical portions to illustrate what has been done, referring the reader to the printed test or scale, which he can secure if he desires. (3) Standard scores which have been set up as a result of the use of the tests and scales in each subject. This portion of the work places in the hands of the reader in condensed form a fairly good summary of the published standards. (4) A section is included in each chapter which discusses how to use the results of measurement. This cannot be said to be an intensive psychological discussion but goes so far as to point out established "laws" of habit formation, memory, etc., with an elementary treatment of the application of these laws to instruction. The authors, however, make very little psychological analysis of the

[1] W. S. Monroe, J. C. De Voss, and F. J. Kelly. Boston: Houghton Mifflin Co., 1917. Pp. xxii+309. $1.50.

learning process in each of the different subjects. The book provides the reader with very complete bibliographies and on the whole will fill a need which has been experienced by school men recently for a fairly complete compilation of the tests which are now available.

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2. *An experimentally determined course of study in elementary-school English.*—The movement for economy of time has nowhere been as well carried out in actual school practice as in Mr. Mahoney's *Standards in English.*[1] It presents an experimental course of study which is the result of two years of investigational work carried on by the author while assistant superintendent of schools in Cambridge, Mass. It makes use of scientific method in that the actual status of results of elementary instruction in English was first determined by testing. Measurement of attainments revealed a condition which was admittedly unsatisfactory. Careful determination by the judgment of teachers as to what was the matter with the English course resulted in the establishment of minimum standards for graduation from the elementary school. Mr. Mahoney's succinct statement of this minimum standard and of the fundamental problem recognized by the whole investigation is well worth quoting:

> These points—*minimum standards*—were made the end to be attained by the new course of study which it became necessary to write. From the standpoint of economy of time, the first advance step had been taken by defining clearly *just what was most conspicuously the matter* with the work in English at a certain stage. To remedy what was wrong, teachers were told very distinctly *what to do*. They might do more. They might teach the idea of the paragraph. They might teach various points of technique and of style in the upper grades. In the course of study as laid out, work of this kind was included. But there was to be no more "shooting in the air." Certain things were to be done, regardless. And these things were of so elementary a character that the *teachers knew they could be done.*
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> The next step was to set down in a course of study *how* they could be done with *most economy of time*, so that further time might be secured for points only less essential.

We wish that we had the space to quote more liberally from this publication. We shall be able to present but a sketch of what the author has done. In brief, he has published a course of study which has been tried out and proven to be very successful in correcting the defects noted above. Part I is a manual of principles and suggestions concerning a course of study. Part II contains the detailed outline of the course organized by grades. The work of each grade is arranged in accordance with the following general scheme: (1) aims of instruction, very specifically stated and discussed in such a way as to aid the teacher in carrying them out; (2) suggestive topics in the illustrative

[1] *Standards in English.* By John J. Mahoney. Yonkers-on-the-Hudson, N.Y.: World Book Co., 1917. Pp. xi+198. Paper, $0.90.

material; (3) illustrative oral efforts; (4) common errors of speech, misspellings, etc.; (5) hints and helps concerning what to do and how to do it; (6) preparation for routine work. One of the outstanding characteristics of the course is the setting forth of definite standards of achievement of which the children have been proven to be capable of attainment. The style of the book is direct and non-technical and it should be put in the hands of elementary-school teachers for the distinct improvement of oral and written work in English.

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3. *The use of practice exercises in arithmetic.*—The design and use of standardized tests can be made effective in school practice only with the consequent construction and use in the classroom of corrective practice material, the aim of which is to remedy the defects revealed by the tests. In the last three years several different sets of practice exercises in the four fundamentals in arithmetic have been devised. Many school systems have made use of them. Aside from the commercial aspect of the matter, school teachers are distinctly interested in any experimental determination of the relative results obtained with the use of these exercises. It is with a great deal of interest, therefore, that we report Professor Mead's *Experiment in the Fundamentals.*[1] This is a systematic attempt to determine experimentally the value of the *Courtis Standard Practice Tests* and Thompson's *Minimum Essentials.* Nine hundred fifth-grade children, from fourteen Cincinnati schools, divided into two groups of approximately twenty-four in a class, were trained fifteen minutes daily, February to May, inclusive, 1916, with the two types of material. Preliminary and final standard tests were given to each group, using the Courtis Tests, Series B. The work of the four months was done by the controlled method with respective material for each group. Median accomplishments were used as methods of comparison of the two groups. Scores for the pupils were obtained both in the preliminary and final tests, and from the daily scores made by practice exercises. These were checked up by the opinions and criticisms of teachers and principals. The statistical results show, in the main, the superiority of the Courtis material. It is to be hoped that such purely objective comparisons will be made of the scientific and practical material which is coming out as a result of the quantitative movement in education.

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4. *A technical study of school boards.*—One of the most critical administrative problems which is now being studied by the quantitative method is that of the relations between boards of education and their professional chief executives. Last year the Department of Superintendence, working through a committee of school men, made a study of this problem by the question-blank method. Their findings, which show the real need for reform in the present

[1] *Experiment in the Fundamentals.* By Cyrus D. Mead. Yonkers-on-the-Hudson, N.Y.: World Book Co., 1917. Pp. xiv+54. $0.60.

differentiation of school control between lay and professional agents, have been published. During the last three years several careful analyses have been made of this problem in our larger city systems by survey staffs. The most noted of these is that reported by Ayres in his *School Organization and Administration* in the Cleveland Survey Report. With this attempt to determine the present status of such problems by careful personal investigation there has been needed a tabular survey of the published records of school systems throughout the country. Dr. Theisen's Monograph on the *City Superintendent and the Board of Education*[1] comes to satisfy this need.

This reports the analysis of rules and regulations and board minutes in 160 cities, varying in size from Westport, Mass., with a population of 3,000, to New York City. It includes nearly all of the larger cities. The study is concerned with the way in which provision is made in the by-laws of boards for the performance of duties which commonly devolve upon them. It is concerned also with what boards do, whether it be the result of inactivity or overactivity, or whether it be the result of legal restriction or a combination of these factors.

Even a casual examination of state school laws is sufficient to convince the student of educational administration that the statutes do not prevent boards from knowing what they are doing; from bending every effort (except in San Francisco, which provides for popular election of the superintendent) to secure as their chief executive officer the most capable man available; from looking to their chief executive for recommendations on questions of policy; from requiring of their executive officers adequate reports of the educational progress and business conditions of the school system; from an intelligent discussion of such reports; from requiring their chief executive and his assistants to submit a detailed analysis of proposed expenditures and probable receipts, showing just what each unit of educational endeavor will probably cost; from centering their own attention on large questions rather than too trivial matters. An examination of school laws reveals further that boards are not deterred by legal provisions from refusing to appoint teachers and other officers, so far as the appointive power rests with the board, except as they are nominated and recommended by the chief executive. It does not prevent them from refusing to squander their own time in listening to personal complaints and communications unless it is found that the matter in question cannot be adjusted satisfactorily by those whom it employs to administer its system of education.

The investigation studies: the size of board, number of members, number and size of committees, a description of the powers and of the actual performance of these committees, the conception which the board has formed of the professional aspects of the superintendent's position, how the board spends its time, the way in which it centralizes or differentiates matters of school control, the degree to which the board is equipped to pass upon the recommendations

[1] *City Superintendent and the Board of Education.* By W. W. Theisen, Teachers College, Columbia University, Contributions to Education, No. 84, 1917. Pp. ix+137.

of the superintendent, etc. The need for a reform in administrative organization is pointed out with careful discussions showing what is done in the business world.

This study puts in printed form a very much needed compilation of the present legalized relations between boards of education and superintendents. If made use of by school officers it will lend impetus to the movement which is aimed at making clear the best differentiation of power between lay and professional officers.

TWO NEW BOOKS ON SCHOOL HEALTH WORK

5. In *The School Nurse* Dr. Struthers has written down the outcome of more than fifteen years of successful work as nurse, organizer, and administrative head of the departments of school nursing in New York City, Toronto, Canada, and several other cities.[1] The book is a survey of the duties and responsibilities of the nurse in the maintenance of health and physical perfection and the prevention of disease among school children. In introducing the problem the author shows that the fundamental influence of the school nurse has been felt in changing a health policy which excluded diseased children from school and next set out upon a campaign of cure for school children to the present function of preventing disease and its spread by intimate contact with the home. In other words, the school nurse is becoming a most important professional intermediary between the home and the school. This book is both a book of general principles and a manual of specific directions to those engaged in the work. It contains, for example, a brief historical discussion (chap. ii) showing the recency of medical inspection of schools and describing briefly the origin and growth of the movement in a dozen of the larger cities of the country. In chapter iii problems of organization of school-nurse work in a city are discussed with the inclusion of both general principles and very detailed suggestions for the inauguration of the department. In this regard the book becomes a valuable "case" handbook. Specific directions are given concerning how to begin the daily routine of the nurse and assistants, her duties in class inspection, special examinations, and home visiting. The author carries out the handbook idea in chapter iv by publishing many pages of specific rules and regulations for the guidance of medical and dental inspectors and nurses. The issue that has arisen over the administration of medical and dental inspection of schools—whether it shall be by the board of health or by the board of education—is debated in chapter v, the position being taken that the board of education is the proper agency for school health control. Specific suggestions are made for state regulations of such auxiliary school work which should be of great value to legislative committees and those interested in propagating the movement. Specific directions for the formation of little mothers'

[1] *The School Nurse.* By Lina Rogers Struthers, R.N. New York: G. P. Putnam's Sons, 1917. Pp. xiv+294. $1.75.

classes and school baby clinics are presented in chapter vii, and open-air schools in chapter viii. The discussion of specific diseases in chapter ix contains a detailed manual of suggestions for diagnosis and treatment as far as these are proper functions of the school nurse. Tuberculosis and the organization of anti-tuberculosis work in the public schools, derangements of nutrition, large tonsils and adenoids, defective hearing and vision, dental caries and school dental clinics, are presented with an emphasis upon a practical application of principles which will be helpful to the nurse. The book closes with a discussion of the qualifications, habits, and ideals of the school nurse. The appendix contains a complete system of reports and records for a department of medical inspection in a city school system.

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6. The remarkable changes in social and economic life which have been typified by the disappearance of child work, the increased congestion in cities, the rapid overburdening of the nervous system, and the constant lowering of the physical vitality of the race have resulted in a definite demand for the organized treatment of the physical upbuilding of men in their leisure time.

If the tendencies which were ushered in with the coming of the public school, the age of machines, and the concentration of people in great cities were to go on for a generation or two more, it would mean the elimination of the race. It is absolutely essential that we should surround our children by more wholesome conditions, that we should give to them a more stable nervous system and a more robust physique than the average school child of today possesses.

Dr. Curtis' recent book[1] from which the foregoing quotation is taken is an attempt to give superintendents of schools, social workers, mothers' clubs, and playground commissions that information on the play movement which will be most helpful to them.

The word "play" has been used in its broadest sense as the effort has been to give a general picture of those movements which mean a better utilization of leisure time and an increase in the joy of life. Its main emphasis has been upon the play of children, but it deals also to a less degree with recreation for adults. It aims to show the place of school playgrounds, of the municipal playground, the park, and various commercial forms of recreation in a general scheme for a city.

As was the case of nearly every extra-traditional curricular activity that has eventually tied up with the public schools, the play movement in the United States started through private endeavor and financial support. The author gives a brief sketch of this movement and points out the fivefold aspect of this development. He says there are five play movements: first, the movement to provide a place for play where children can go in their leisure time; second, the attempt to put organized play into the program of the public schools; third, the movement to furnish an adequate opportunity for an outdoor life

[1] *The Play Movement and Its Significance.* By H. S. Curtis. New York: Macmillan, 1917. Pp. xv+346. $1.50.

and play for children below the school age; fourth, the movement for public recreation; and fifth, the distinct movement for the development of the spirit of play. The author builds upon his previous book, *Education through Play*, and gives first an abbreviated discussion of the essential principles which were developed there. He has based his discussion and criticism of the attempts of the school in this direction on three desiderata: (1) adequate playgrounds, (2) adequate time for play, (3) adequate supervision. He particularizes the general discussion by a detailed presentation of the Gary system in which play has been so successfully organized.

The book is not merely a general sketch of the movement, and while it is not proper to characterize it as a manual of instruction for those who are organizing play work it does illustrate each aspect of the work by detailed discussions of the carrying on of organized recreational facilities in many cities. The book is characterized by an intelligent recognition of the needs of city people for play and is filled from cover to cover with definite concrete suggestions concerning what to do and how to do it. Not the least practical of its chapters is the one which gives a very good discussion of the organization of play activities in institutions for the blind, the deaf, the feeble-minded and the insane, industrial schools, reformatories, penitentiaries, sanitariums and hospitals.

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7. *A textbook in educational psychology.*[1]—Texts in educational psychology may be classified according as their emphasis is upon the psychological or the educational phase of the subject. One may start with the facts and principles of general psychology and select those which seem to be of most significance for education, and then make whatever application can be found of these facts. When educational psychology is of this type the topics and their arrangement usually suggest, primarily, the psychological starting-point. The other method is to start from the education problems, to put them in psychological terms, and then attempt their solution.

Dr. Gordon's text[2] is of the first type. Furthermore, it is a rather extreme example of this type, in that many of the facts and principles which are selected for treatment seem to have only remote application to educational problems. In fact, the book does not differ very greatly from a general text in psychology. This constitutes in the mind of the reviewer a basis of criticism, since the more fruitful kind of educational psychology is coming to be regarded as that which deals more directly with the practical problems.

The nature of the book may be seen from a brief survey of its contents. After an introductory chapter, five chapters are devoted to various aspects of the child's development; one is given to physical growth, two to instinct, one to motor development, and one to the development of the sensations. One

[1] This review is contributed by Professor F. N. Freeman, University of Chicago.

[2] *Educational Psychology.* By Kate Gordon. New York: Henry Holt & Co., 1917. Pp. 294.

chapter is then given to the learning process, which is concerned chiefly with the simpler development of manual skill. One is given to imagination, in which the chief emphasis is upon such matters as tests of imagery and the theories of the imagination. There is a chapter on observation and report which has more obvious application to the work of the school, and one on memory, which takes up some of the factors and problems of memorizing. These factors, such as recency, frequency, vividness, etc., might be presented so as to bring out somewhat more clearly the practical rules which are to be derived from them. Three chapters are given to reasoning, one of them of seventeen pages being devoted to syllogism. In contrast to this somewhat extended treatment for such a text of a subject which has relatively little practical bearing even upon the ordinary process of thinking, but eight pages are devoted to the subject of transfer of training, which touches upon a real and important issue in education. After a chapter of fourteen pages on attention, feeling, and will, three chapters are devoted to the psychology of the teaching of language, drawing, and arithmetic.

This text is designed for use in normal schools and colleges, and presupposes an introductory course in psychology. Since a previous course in psychology is assumed, there are certain parts of the discussion of the nature of description and definition which do not seem to be necessary. On the other hand, the general mode of treatment makes the book suited to an advanced type of student and too difficult at least for normal-school students. The style is a rather disconnected one, and the treatment rather uneven, due to the fact that the discussion is based largely upon direct citation of original sources. One hundred and fifty-two such citations are made in the book. While this method is desirable for advanced students and may be thought desirable from the point of view of scientific accuracy, it is confusing to the relatively immature student. It is this preoccupation with the experimental sources, perhaps, which causes some relatively minor topics to be treated with greater fulness than other practically more important ones. For example, six pages are devoted to a discussion of left-handedness, which is more than is given to play. There is no discussion at all of the changes in play with age. In the discussion of motor development, there is no account of the growth in precision or rapidity of movement. In the discussion of instinct, seven pages are devoted to sleep and dreams and none to the social instincts or attitudes.

While the book does present a rather useful collection of experimental facts with reference to certain phases of psychology as related to education, it is defective as a text in educational psychology because of its too great emphasis upon the psychological aspect of the subject, because of its style, which is unsuited to relatively immature students, and because of its uneven emphasis upon different topics.

III. BRIEF DESCRIPTIVE STATEMENTS OF NEW PUBLICATIONS

The School Assembly. By A. NIFENECKER. New York: Department of Education, Division of Reference and Research. Publication No. 15, 1917. Paper. Pp. 107.

A handbook of auditorium exercises, put in the hands of principals responsible for conducting school assemblies; a manual of illustrative material. Shows the true aims and values of assemblies and gives much detailed concrete material to be used in organizing programs; for example, stereopticon slides, institutions that loan them, and collections of material which are available. Motion picture films, methods of using. Lectures by teachers, pupils, outsiders. Music, choral, instrumental, appreciation, phonographs, recitals. Bible readings, declamations and recitations, story-telling, selection of material, method. Dramatizations, plays, festivals, folk dances, mimetic drills, debates, contests. Forums, question boxes.

The Profession of Teaching. By O. I. and M. V. WOODLEY. Boston: Houghton Mifflin Co., 1917. Pp. ix+325. $1.35.

A book for teachers and others interested in the profession of teaching, non-technical and addressed to the average or general reader. The first chapter discusses professions in general and attempts to establish the position of teaching as a profession. Remaining chapters deal with the demands made upon teachers by the larger idea of education and aim at giving teachers an understanding of the means to be employed in meeting those demands. Important topics discussed are: school ethics, aims, social function of school, learning process, teaching process, recitation, subject-matter, vocational education and guidance. Well-chosen lists of selected readings are given after each chapter and also exercises for reflective thinking. Has a good index.

Lancasterian System of Instruction in Schools of New York. Teachers College Contributions to Education, No. 81. Reigart, 1917. Cloth. 8vo, pp. v+105.

An intensive study in the history of education treating of part played by the monitorial plan in the development of New York City's public-school system from 1805 to 1853. Describes origin and rise of Lancaster's plan and gives reason for introduction into New York. Deals quite specifically with school organization and classification of pupils and gives specimens of floor plans, curricula, and programs. Methods of teaching reading, arithmetic, science, manual training, and religious and moral education are indicated. School inspection, teacher-training, and the good and evil effects of the system are discussed. Good bibliography. Analytical table of contents.

Apprenticeship and Apprenticeship Education. Colonial New England and New York. Teachers College Contributions to Education, No. 85. Seybolt, 1917. Cloth. 8vo, pp. 121.

Historical dissertation dealing with early trade education. The rise of the apprenticeship system in England and its transplanting to the American Colonies are thoroughly described. Educational aspects of the practice of apprenticeship in New Plymouth and Massachusetts Bay colonies, Connecticut, New Haven, and Rhode

Island colonies, and in New York Province are indicated. Based upon legislation, court orders, indentures, wills, and other original sources. Good conclusion. Appendix contains a few transcripts of original documents. Extensive bibliography of source material.

Statistical Methods Applied to Education. By H. O. RUGG. Boston: Houghton Mifflin Co. Pp. xiv+426. $2.00. [To be reviewed in next issue.]

A complete textbook for students of education, superintendents, and teachers untrained in mathematics, of the methods of treating numerical data collected on school problems. A carefully graded discussion showing the lay reader the use of statistical methods in education, the collection and tabulation of data, the derivation, computation, and interpretation of each of the methods now used in the study of school problems: the frequency distribution, averages, measures of variability, ideal curves and their use, measures of relationship, the use of statistical methods in reporting school facts.

Illustrative Problems in Educational Statistics. By H. O. RUGG. 35 problems. Published and distributed by the author, School of Education, University of Chicago. Paper. $0.60.

A book of statistical problems designed to accompany the author's textbook. For administrative officers and teachers as well as formal class use in normal schools and schools of education. Provides opportunity for practice in working problems which involve each of the statistical methods now used by school men.

News Writing. The gathering, handling, and writing of news stories. By M. LYLE SPENCER. D. C. Heath & Co., 1917. Pp. 352.

Contents: *Organization of the paper*, the different editors and their duties, the mechanical department, speed devices, the business department. The news story: what is news, interest, sources, methods of getting stories, interviewing, etc. Types of stories: as interviews, speeches, courts, accidents, etc.

IV. CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN SEPTEMBER AND OCTOBER

(Detailed discussions of some of the following publications will appear later.)

A. GENERAL EDUCATIONAL THEORY AND PRACTICE

DE HOVRE, FR. *German and English Education. A Comparative Study.* New York: Scribner, 1917. Pp. 108.

DIFFENDORFER, RALPH E. *Missionary Education in Home and School.* New York: Abingdon Press, 1917. Pp. 407. $1.50.

REED, ANNA Y. *Newsboy Service. A Study in Educational and Vocational Guidance.* Yonkers-on-Hudson: World Book Co., 1917. Paper. Pp. xxviii+175. $0.60.

SMITH, HENRY LESTER. *A Survey of a Public-School System.* New York: Teachers College, Columbia University, 1917. Pp. xii+304. (To be reviewed in next issue.)

SNEDDEN, DAVID. *Educational Sociology. A Digest and Syllabus. Part I: Introduction.* New York: Teachers College, Columbia University, 1917. Paper. Pp. 37. $0.55.

———. *Educational Sociology. A Digest and Syllabus. Part II: Applications to Curricula and Studies.* New York: Teachers College, Columbia University, 1917. Paper. Pp. 70. $0.80.

TEACHERS OF THE HORACE MANN ELEMENTARY SCHOOL. *The Curriculum of the Horace Mann Elementary School.* New York: Teachers College, Columbia University, 1917. Paper. Pp. iv+138.

WINCHESTER, BENJAMIN S. *Religious Education and Democracy.* New York: Abingdon Press, 1917. Pp. 293.

B. TEXTBOOKS FOR THE ELEMENTARY GRADES

BURROUGHS, JOHN. *The Wit of a Duck.* Boston: Houghton Mifflin Co., 1913. Pp. 96. $0.28.

CHAPLIN, ALETHEA. *A Treasury of Fairy Tales.* New York: Thomas Y. Crowell Co. 12mo, pp. 129. $0.50. Illustrated.

Contents: "Babes in the Wood," "Puss in Boots," "Red Riding Hood," and other stories.

CORY, DAVID. *The Adventures of Puss in Boots, Jr.* New York: Harper, 1917. Pp. 149. $0.50.

GASK, LILIAN. *A Treasury of Folk Tales.* New York: Thomas Y. Crowell Co. Illustrated. 12mo, pp. 123. $0.50.

Contents: "The Golden Fish" (Russian), "The Two Brothers" (Slovak), and others.

GREGG, F. M. *Hygiene as Nature Study.* Published by author, Peru, Neb. Paper. Illustrated. Pp. 169. $0.70.

A noteworthy attempt to vitalize the teaching of physiology and hygiene.

HARRIS, ADA VAN STONE, and WALDO, LILLIAN MCLEAN. *Number Games for Primary Grades.* Chicago: Beckley-Cardy Co. Pp. 123. $0.60.

IRVING, WASHINGTON. *Tales from the Alhambra* (adapted by Josephine V. Brower). Boston: Houghton Mifflin Co., 1917. Pp. 192. $0.44.

Kipling Stories and Poems Every Child Should Know. Book I. Edited by MARY E. BURT and W. T. CHAPIN. Boston: Houghton Mifflin Co. Pp. vi+142. $0.44.

MILLER, ALBERT H. *The Modern Speller.* Chicago: M. A. Donohue & Co., 1917. Pp. 88.

To teach correct spelling of the words most frequently used, with emphasis on permanent retention.

MEYER, ZOE. *The Outdoor Book.* For second school year. Boston: Little, Brown & Co., 1917. Illustrated. Pp. vii+123. $0.40.